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PERSONAL.

Mr. Alfred L. Maggi has been appointed Superintendent of Streets and City Engineer of Chelsea, Mass.

Prof. R. W. Wood, of the University of Illinois, has started on a trip to England, where he will address the Physical Society of London and the Society of Arts and Sciences.

Mr. R. P. C. Sanderson, at present Master Mechanic of the Norfolk & Western Ry., has been appointed to succeed Mr. George H. Hancock as Assistant Superintendent of Machinery on the Santa Fe Pacific R. R.

Mr. Ralph H. Chambers, Assoc. M. Am. Soc. C. E., and Mr. Frederic D. Hone have opened an office as consulting engineers at 60 New St., New York city, under the firm name of Chambers & Hone. In our issue of Jan. 11 Mr. Hone's name was incorrectly printed as Howe.

Mr. Arthur Bateman Corthell, M. Am. Soc. C. E., has resigned his position with Westinghouse, Church, Kerr & Co., to accept the appointment of Resident Engineer of the Boston Terminal Co. He will have charge of Maintenance of Structure and Mechanical and Electrical Equipment.

Mr. Baxter L. Brown has been appointed Assistant Engineer of the Missouri Pacific Ry. system, having charge of the St. Louis, Iron Mountain & Southern Ry., and branches, covering about 1,800 miles. His office is at St. Louis, Mo. He was until recently Resident Engineer on the Wabash R. R., at Moravia, Ia.

Mr. John J. Swann has gone to Paris to represent the Ingersoll-Sargeant Drill Co. at the Exposition. He will superintend the installation of the compressed air power plant in the American Section. Mr. Swann was formerly a member of the editorial staff of Engineering News, and he will represent this journal at the Exposition.

Dr. Bonji Mano, Professor of Mechanical Engineering in the Imperial University of Tokyo, Japan, is visiting this country, en route to Paris. Dr. Mano has been commissioned by the Imperial University to oversee the installation of the Japanese scientific exhibits at the Paris Exposition and to make scientific observations. His chief duty will be to install the seismograph invented by Dr. Omori of Tokyo.

Mr. Stanley W. Hayes has been appointed Division Engineer of the Western Division of the New York Central & Hudson River R. R., vice Mr. E. F. Van Hoesen. Mr. Hayes leaves the position of Engineer of Maintenance of Way on the Cleveland-Indianapolis Division of the Cleveland, Cincinnati, Chicago & St. Louis Ry. In our last issue it was erroneously stated that Mr. D. E. Dale would succeed Mr. Van Hoesen. Mr. Dale is Roadmaster of the Syracuse Division.

OBITUARY.

Mr. Joseph G. Kirk, Civil Engineer, of Stratford, N. Y., died on Jan. 24.

Colonel John Hornby, President of the Fort Worth & Rio Grande R. R., died suddenly on Jan. 27 at his home in Fort Worth, Tex.

Mr. Robert Francis Portner, electrical and civil engineer, died on Jan. 23 at his home in Washington, D. C. Mr. Portner was a graduate of the Massachusetts Institute of Technology.

Mr. C. C. Burnett, Superintendent of the Worcester Division of the New York, New Haven & Hartford Ry., died at Providence, R. I., Jan. 17. Mr. Burnett graduated from Harvard University in 1886.

Mr. W. H. Albro, Secretary of the German Rock Asphalt Co., and of the Buffalo Expanded Metal Co., of Buffalo, N. Y., died on Jan. 20, in the City of Mexico, where he had gone to bid on a large paving contract.

Colonel Arthur Moore, formerly Superintendent of Water-Works, and at one time Chief of Police of Cincinnati, O., died at his home in that city on Jan. 23. After leaving public life Col. Moore entered business as a hydraulic engineer.

Mr. Louis F. Powell died recently at his home in Syracuse, N. Y. Mr. Powell was a graduate of Hobart College and was one of the builders of the Rome, Watertown & Ogdensburg R. R. In recent years he has been the manager of a foundry and machine shop established in Syracuse by his father.

Mr. W. T. Lambie was killed by accident while in performance of engineering duty as Inspector of Tunnels for the city of Los Angeles, Cal., on Jan. 21. Mr. Lambie was a former City Engineer of Los Angelos. He was also at one time Constructing Engineer for the Southern Pacific Ry. Co., and during the Civil War a Major of Engineers in the Confederate Army.

Mr. John I. Macleod died on Jan. 22 at his home in Louisville, Ky. Mr. Macleod was a prominent railway builder. His first important work was the construction of the Cecilia branch of the Louisville & Nashville Ry. Shortly after the completion of this work he was appointed receiver of the Lake Charles & Leesville Ry. In 1880 he became General Superintendent of the Chicago, Indianapolis & Louisville Ry. He then took charge of the Lousville Southern Ry., and carried it to successful completion. In 1880 he was made receiver of the Richmond, Nicholasville, Irvine & Beattyville R. R., which position he held until a short time ago, when the affairs of the road were disposed of. At the recent sale and reorganization of the road Mr. Macleod was made president of the company. In 1894 he was appointed receiver of the New Albany Ry. Co.

ENGINEERING SOCIETIES.

COMING GENERAL MEETINGS.

LAKE SUPERIOR MINING INSTITUTE.
Feb. 6. Annual meeting at Iron Mountain, Mich. Secy., F. W. Speer, Houghton, Mich.

AMERICAN PAPER AND PULP ASSOCIATION.
Feb. 14-15. Annual meeting at New York city. Secy., C. W. Ranford, 101 Times Building, New York city.

AMERICAN INSTITUTE OF MINING ENGINEERS.
Feb. 20. Annual meeting at Washington, D. C. Secy., R. W. Raymond, 99 John St., New York city.

ASSOCIATION OF ONTARIO LAND SURVEYORS.
Feb. 27 to Mar. 1. Annual meeting at Toronto, Can. Secy., A. J. Van Nostrand, Yonge St. Arcade, Toronto, Can.

INTERNATIONAL MINING CONGRESS.
June 19 to 23. Annual meeting at Milwaukee, Wis. Secy., Irwin Mahan, Sentinel Building, Milwaukee, Wis.

COMING LOCAL MEETINGS.

ENGINEERS' CLUB OF COLUMBUS.
Feb. 3. Secy., H. M. Gates, 12½ North High St., Columbus, O.

ENGINEERS' CLUB OF PHILADELPHIA.
Feb. 3. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.

ENGINEERS' SOCIETY OF WESTERN NEW YORK.
Feb. 5. At Buffalo. Secy., H. J. March, Library Bldg., Buffalo, N. Y.

AMERICAN SOCIETY OF CIVIL ENGINEERS.
Feb. 7. At New York. Secy., C. W. Hunt, 220 W. 57th St., New York city.

ENGINEERS' CLUB OF ST. LOUIS.
Feb. 7. Secy., Richard McCulloch, 2401 N. Spring Ave., St. Louis, Mo.

BROOKLYN ENGINEERS' CLUB.
Feb. 8. At Brooklyn, N. Y. Secy., A. J. Provost, Jr., 191 Montague St., Brooklyn, N. Y.

ST. LOUIS RAILWAY CLUB.
Feb. 9. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.

CIVIL ENGINEERS' CLUB OF CLEVELAND.
Feb. 13. Secy., W. H. Searles, Case Library Bldg., Cleveland, O.

DENVER SOCIETY OF CIVIL ENGINEERS.
Feb. 13. Secy., W. B. Lawson, 36 Jacobson Bldg., Denver, Colo.

AMERICAN ASSOCIATION OF INVENTORS AND MANUFACTURERS.—The ninth annual meeting of the association was held in Washington on Jan. 16.

INTERNATIONAL MINING CONGRESS.—The third annual session of the congress will assemble June 19, 1900, in Milwaukee, Wis., and continue to June 23.

Irwin Mahon, Secy., Milwaukee, Wis.

MONTANA SOCIETY OF ENGINEERS.—The headquarters of the society have been changed from Helena to Butte, Mont., to which place all communications should hereafter be addressed. Robert A. McArthur, Secy.

ENGINEERS' CLUB OF COLUMBUS.—At the regular meeting of the club, held on Jan. 20, Mr. J. F. Firestone read a paper on "Automobiles." His paper was followed by a general discussion. The subject of liquid air was also considered and a report will be heard at the next meeting from a committee now investigating liquid air.

ROCHESTER ENGINEERING SOCIETY.—At the meeting of Jan. 19, Mr. Wm. N. Radenhurst spoke upon the subject of "Early Work in the Department of Docks in New York City." The speaker described the different channels by means of a large map, showing where the docks were located and what material had been used in their construction. Most of these, he said, had tile and rip-rap foundations, which were more rigid and warded off the heavy waters better than other materials.

SCRANTON ENGINEERS' CLUB.—At the annual meeting of the club, held Jan. 25, the following officers were elected for the ensuing year: President, C. C. Rose; Vice-President, H. W. Rowlay; Recording Secretary, H. B. Cox; Corresponding Secretary, Morgan Davis, Jr.; Treasurer, A. C. La Mont; Librarian, A. E. Listur. Directors, James Archbald, A. D. Blackington, W. M. Murphy. After the business meeting about 75 of the 150 members of the club sat down to the annual banquet.

Morgan Davis, Jr., Secy.

THE ENGINEERS' CLUB OF PHILADELPHIA.—A regular meeting of the club will be held on Feb. 3, when a paper on "The Utilization of Bacteria and Bacteriological Methods in Modern Sanitary Engineering," will be presented by Prof. A. C. Abbott. At the annual meeting, held Jan. 20, an address was given by the retiring President, Mr. Francis Schumann, upon "Æsthetics and the American Engineer." The following officers were elected for the ensuing year: President, Edgar Marburg; Secretary, L. F. Rondinella. L. F. Rondinella, Secy.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.—The 139th meeting of the institute was held on Jan. 24. A paper was presented by Mr. Futzhugh Townsend of New York city, on "A New Method of Tracing Alternating Current Curves." The discussion was opened by Dr. Sheldon and continued by Mr. C. P. Steinmetz and Dr. M. I. Pupin. A paper was also read by Mr. Chas. P. Steinmetz, of Schenectady, N. Y., entitled "Notes on Single-Phase Induction Motors and the Self-Starting Condenser Motor." Messrs. Pupin, Bradley and others took part in the discussion.

At the meeting of council held in the afternoon, the President announced the death of James Hamblet formerly a Vice-President and Manager of the Institute, also of Samuel Dana Greene, who at the date of his decease was serving the first year of his term as Manager. It was voted to hold the next general meeting of the institute in Philadelphia, which should adjourn to meet in Paris on Aug. 16. The date of the meeting in Philadelphia was not fixed.

AMERICAN INSTITUTE OF MINING ENGINEERS.—As already announced, the 78th meeting of the institute will be held at Washington, D. C., beginning Feb. 20, 1900. Professor Charles D. Walcott, Director of the United States Geological Survey, is Chairman, and Mr. E. W. Parker, United States Geological Survey, is Secretary, of the Local Committee. The following programme is provisionally announced: An address will be delivered by Director Walcott on "The Work of the United States Geological Survey in Relation to the Mineral Resources and Mining Industries of the United States," and Mr. G. K. Gilbert, of the Survey, will exhibit a series of lantern views of Alaskan scenery, selected from a large number of photographs recently taken by him. Among the numerous papers announced for this meeting, special interest attaches to those which will be presented by members of the United States Geological Survey, besides the address of Director Walcott, already mentioned. The following papers may be named under this head: "Some Principles Controlling the Deposition of Ores," by Professor C. R. Van Hise; "Application of the Principles of Ore Deposition to the Iron Ores of Lake Superior," by Professor C. R. Van Hise; "Secondary Enrichments of Ore Deposits," by S. F. Emmons; "Metasomatic Processes in Fissure Veins," by Waldemar Lindgren; "Secondary Sulphide Enrichment of Silver Veins," by Walter H. Weed; "Vein Formation at Boulder Hot Springs, Montana," by Walter H. Weed; "Notes on the Nome Gold Mining District, Alaska," by F. C. Schrader and A. H. Brooks; "A Peculiar Dike and Its Associated Ore Deposits at Jerusalem, Utah," by F. L. Ransome; "The Occurrence of Platinum in the United States," by David T. Day; "Hydrographic Investigations of the United States Geological Survey in Their Relation to Mining," by F. H. Newell. To this list may be added the following papers on kindred subjects, announced by members of the institute outside of the United States Survey: "Gold Ores of the Black Hills, South Dakota," by H. M. Chance, Philadelphia, Pa.; "The Lode Structure of the Cripple Creek District, Colorado," by T. A. Rickard, Denver, Colo.; "Gold Mining in Zamma, Ecuador," by James R. Finlay, Colorado Springs, Colo.; "Mica Deposits and Mica Mining in the United States," by J. A. Holmes, Chapel Hill, N. C.; "Origin and Classification of Ore Deposits," by Charles R. Keyes, Des Moines, Ia. Interesting papers on iron, coal mining, and other subjects, have been announced, and will be presented at other sessions. A complete list will be given in the local programme.

NEW PUBLICATIONS.

DIAGRAM FOR ESTIMATING THE COST OF PIPE SEWERS.—By W. G. Kirchoffer, C. E., City Engineer of Baraboo, Wis. Cardboard; 9 × 6 ins.; 25 cts.

This diagram is based upon the study of over 300 actual bids upon work of this class; and it is intended to indicate the average cost of pipe sewers, per lineal foot; excavation, furnishing, laying and back-filling included; but manholes, catch-basins and other appurtenances are extra. The diagram covers a range of 20 ft. in the depth of trench, and pipes from 6 ins. to 20 ins. diameter. The bids forming the basis of the curves used date from 1894 to 1899, and include the whole United States. Mr. Kirchoffer claims that the diagram, at least, illustrates the law of increase in the cost for an increase in depth of trench; and an engineer familiar with the cost of work at a certain depth can, with this diagram, readily estimate the cost at other depths.

TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 3½ x 6 ins., 6 x 9 ins., and 9 x 12 ins.

CEMENT.—Meacham & Wright, 308 Chamber of Commerce Building, Chicago, Ill. Cards, 5 × 3 ins.

These cards give the records of various tests made of Utica hydraulic cement, at different college laboratories and by testing bureaus, etc.

SECOND-HAND LOCOMOTIVES AND RAILWAY MATERIAL.—M. Mitshkun & Co., Detroit, Mich. Paper; 3¾ × 9 ins.; pp. 32.

This is a list of material on hand in the way of locomotives, cars, turntables, dump cars, track material, steam shovels, contractor's plant, etc.

SEWER FLUSH TANK AND PIPE HOOK.—Berry Flush Tank Co., Iowa City, Ia. Paper; 3½ × 6 ins.; pp. 16; illustrated.

This little pamphlet deals with the flush tank and the pipe hook recently described in our columns, and shows also two forms of trench-braces.

POCKET MAP OF THE PHILIPPINE ISLANDS.—The Walworth Manufacturing Co., 130-136 Federal St., Boston.

This is a new map of the whole group of islands on a scale of about 42 miles to the inch; and an additional map, on a scale of about 20 miles to the inch, covers the present seat of war in the Island of Luzon.

FORGING, UPSETTING AND BOLT-HEADING MACHINERY.—The Ajax Mfg. Co., Cleveland, O. Cloth; 7¼ × 4¾ ins.; pp. 80; illustrated.

This "Ajax Red Book" briefly notes the important features of these machines; illustrates them for use on bolts ranging from ½-in. to 6-in. diameter; gives prices and valuable tabular matter relating to bolts in all their forms.

DRILL GRINDER.—The Fuller Mfg. Co., Kalamazoo, Mich. Paper; 6 × 9 ins.; pp. 4 and 12; illustrated.

These pamphlets describe the Yankee grinder for drills and twist drills. One of the special advantages claimed is that it requires but few adjustments, the size of each drill automatically determining its position in the holder. There is a long list of well-known firms using these machines.

CAR INTERCHANGE MANUAL AND CAR COUPLING DEVICES.—The McConway & Torley Co., Pittsburg, Pa. Paper; 3¾ × 5¾ ins.; pp. 226; illustrated.

The first part of this book comprises abstracts of the decisions of the Arbitration Committee of the M. C. B. Association in disputed questions relating to car interchange. The second part, 100 pages, contains illustrations and particulars of the various coupler and buffer devices, car vestibules and platforms, etc., which are specialties of the McConway & Torley Co.

TURBINES AND WATER WHEELS.—The Dayton Globe Iron Works Co., Dayton, O. Paper, 6 × 9 ins.; pp. 115; illustrated.

This illustrated catalogue is devoted mainly to the "New American" turbine, which is described in detail, while numerous illustrations are given of the mechanism, and of plants operated by these turbines. Tests of the turbines are also described. Wooden and steel flumes, valves, head-gates, gearings, etc., are also included. There are tables of measurement of water power, capacity of turbines, and instructions for setting the wheels. Other specialties of this company are wood-pulp grinders, the Dayton gas engine, and paper mill machinery.

LOCOMOTIVES.—Brooks Locomotive Works, Dunkirk, N. Y. Cloth; 6 × 9¼ ins.; pp. 336; illustrated.

This is a very handsome descriptive and illustrated catalogue of the various types of locomotives which have been built by the well-known builders named to fill their recent American and foreign orders. In each case the latest form of engine which has been built is shown. Besides the illustrations and descriptions of locomotives, the catalogue contains a brief history of the company, discussions on piston valves and compound locomotives, and a dozen or more tables and diagrams for determining tractive power, piston speed and travel, driving-wheel revolutions, mean effective and available pressures, etc., etc.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened.	Work.	Place.	See Eng. News.
Feb. 1.	School building plans	Toronto, Ont.	Nov. 30
Feb. 1.	Pier extension	South Haven, Mich.	Jan. 4
	Advertised, Eng. News, Jan. 4 to 25.		
Feb. 1.	Fire house	Altoona, Pa.	Jan. 18
	Advertised, Engineering News, Jan. 18.		
Feb. 2.	Park work	New York, N. Y.	Jan. 25
Feb. 5.	Flagging	Orange, N. J.	Jan. 25
Feb. 5.	Artesian well	Toledo, O.	Jan. 25
Feb. 5.	Sewer bonds	Bloomfield, N. J.	Jan. 25
Feb. 5.	Pipe and fittings	Perth Amboy, N. J.	Jan. 18
Feb. 5.	Dredging, etc.	Philadelphia, Pa.	Jan. 18
Feb. 2.	Piles (3,000)	New York, N. Y.	Feb. 1
Feb. 5.	Fire engines	Brooklyn, N. Y.	Feb. 1
Feb. 5.	Removing garbage	Poughkeepsie, N. Y.	Feb. 1
Feb. 5.	Picking over refuse, etc.	New York, N.Y.	Feb. 1
Feb. 5.	Sewers, castings, etc.	Atlanta, Ga.	Feb. 1
Feb. 5.	Traveling cranes	Glasgow, Scotland	Feb. 1
Feb. 5.	Fire apparatus	New York, N. Y.	Feb. 1
Feb. 6.	Street improvements	Jersey City, N.J.	Feb. 1
Feb. 6.	Pile revetment	New Orleans, La.	Feb. 1
Feb. 6.	Building materials	Philadelphia, Pa.	Feb. 1
Feb. 6.	Light & water bonds	Crystal Springs, Miss.	Feb. 1
Feb. 6.	City lighting	St. Louis, Mo.	Jan. 18
Feb. 6.	Roads	Mount Holly, N. J.	Jan. 18
	Advertised, Eng. News, Jan. 18 and 25.		
Feb. 6.	Water-works	Ponca City, Okla.	Jan. 25
Feb. 7.	Water pipe franchise	Chico, Cal.	Jan. 25
Feb. 7.	Steel bridge	Vincennes, Ind.	Jan. 25
Feb. 7.	Grading, etc.	Fairview, N. J.	Jan. 25
Feb. 7.	Paving blocks	Winnipeg, Man.	Jan. 18
Feb. 7.	Laying water mains	Chicago, Ill.	Feb. 1
Feb. 7.	Masonry arch (2)	Cleveland, O.	Feb. 1
Feb. 7.	Fire house	New York, N. Y.	Feb. 1
Feb. 8.	Bridges	Warrensburg, Mo.	Jan. 11
Feb. 8.	Interior decorating	Milwaukee, Wis.	Jan. 11
Feb. 8.	Water-works	Essex Junction, Vt.	Jan. 25
Feb. 9.	Boiler breeching	Chicago, Ill.	Jan. 25
Feb. 9.	Sewers	Martinsville, Ind.	Jan. 11
	Advertised, Engineering News, Jan. 11.		
Feb. 10.	Electric plant	Monticello, Ark.	Jan. 11
	Advertised, Eng. News, Jan. 11 and 18.		
Feb. 10.	Water-works	Monticello, Ark.	Jan. 11
	Advertised, Eng. News, Jan. 11 and 18.		
Feb. 10.	Electric wiring	Norfolk, Va.	Jan. 11
Feb. 10.	Storehouse and sheds	Buffalo, N. Y.	Jan. 11
	Advertised, Eng. News, Jan. 11 and 18.		
Feb. 10.	Cement	Duluth, Minn.	Jan. 11
	Advertised, Eng. News, Jan. 11 to Feb. 1.		
Feb. 10.	Water pipe	Bath, Me.	Jan. 18
	Advertised, Eng. News, Jan. 18 and 25.		
Feb. 10.	Bridge, double-draw span	Alameda, Cal.	Jan. 18
Feb. 10.	Steam purifiers (6)	Chicago, Ill.	Jan. 25
Feb. 10.	Blacksmith shop, etc.	Norfolk, Va.	Jan. 25
Feb. 12.	Dormitory etc.	Pipestone, Minn.	Jan. 25
Feb. 12.	Pipe sewers	Harrisonburg, Va.	Jan. 25
Feb. 12.	Sewers, Oil City	Pa.	Jan. 18
Feb. 12.	Reservoir, etc.	Todmorden, England	Jan. 18
Feb. 12.	Sewer and water bonds	Lima, O.	Jan. 18
Feb. 12.	Dredging	Milford Haven, Va.	Jan. 18
	Advertised, Eng. News, Jan. 18 to Feb. 8.		
Feb. 12.	Sewers	Sacramento, Cal.	Feb. 1
Feb. 12.	Building fixtures, etc.	Paterson, N.J.	Feb. 1
Feb. 12.	Electrical apparatus	Bath, England	Feb. 1
Feb. 12.	Electric lights	Corry, Pa.	Feb. 1
Feb. 12.	Gas exhausters	Edinburgh, Scotland	Feb. 1
Feb. 12.	County jail	Alturas, Cal.	Feb. 1
Feb. 13.	Schools	New York, N. Y.	Feb. 1
Feb. 13.	Electric plant	Tallahassee, Fla.	Feb. 1
Feb. 13.	Steel building	Saltillo, Mex.	Feb. 1
Feb. 13.	Naval supplies	Vallejo, Cal.	Feb. 1
Feb. 13.	Officers' quarters	West Point, N. Y.	Jan. 18
Feb. 13.	Paving	Chicago, Ill.	Jan. 25
Feb. 14.	Alma house	Johnstown, N. Y.	Jan. 18
Feb. 14.	Bridge and abutments	Des Moines, Ia.	Jan. 18
Feb. 14.	Brick sewer	Champaign, Ill.	Feb. 1
	Advertised, Engineering News, Feb. 1.		
Feb. 14.	Steel span	Charlottetown, P.E.I.	Feb. 1
Feb. 15.	Lock and dam	Ottawa, Ont.	Feb. 1
Feb. 15.	Gasoline engine, etc.	Waco, Tex.	Feb. 1
Feb. 15.	Boilers	Yarmouth, England.	Feb. 1
Feb. 15.	Guns, etc.	Fort Mott, N. J.	Jan. 18
Feb. 15.	Light franchise	Covington, Ky.	Jan. 18
Feb. 15.	Sewers and water-works	Tampico, Mex.	Oct. 12
Feb. 15.	School furniture	Havana, Cuba	Jan. 11
Feb. 15.	Lighting (1 year)	York, Pa.	Jan. 11
Feb. 15.	Paving material	Galveston, Tex.	Jan. 25
	Advertised, Eng. News, Jan. 25 and Feb. 1.		
Feb. 15.	Reservoir	Wilkinsburg, Pa.	Jan. 25
	Advertised, Eng. News, Jan. 25 to Feb. 8.		
Feb. 15.	Foundations	Cleveland, O.	Jan. 25
	Advertised, Eng. News, Jan. 25 to Feb. 8.		
Feb. 16.	Dredging	Cleveland, O.	Jan. 25
	Advertised, Eng. News, Jan. 25 to Feb. 8.		
Feb. 16.	Boom	New Orleans, La.	Jan. 25
Feb. 16.	Street railway franchise	Salinas, Cal.	Feb. 1
Feb. 17.	Sewers	Wilkesbarre, Pa.	Jan. 25
Feb. 17.	Ammunition hoists	New London, Conn.	Jan. 18
	Advertised, Eng. News, Jan. 18 to Feb. 8.		
Feb. 17.	Machine shop	Vallejo, Cal.	Jan. 18
Feb. 17.	Jetties	Jacksonville, Fla.	Jan. 18
	Advertised, Eng. News, Jan. 18 to Feb. 8.		
Feb. 19.	Water-works material	Starkville, Miss.	Jan. 18
	Advertised, Eng. News, Jan. 18 and 25.		
Feb. 19.	Brick sewer	Fort Wayne, Ind.	Jan. 18
	Advertised, Eng. News, Jan. 18 to Feb. 8.		
Feb. 19.	School-house bonds	Allegheny, Pa.	Jan. 25
Feb. 19.	Dredging	New London, Conn.	Jan. 25
	Advertised, Eng. News, Jan. 25 to Feb. 15.		
Feb. 19.	Paving	Toledo, O.	Jan. 25
Feb. 19.	Paving	Newport News, Va.	Jan. 25
	Advertised, Eng. News, Jan. 25 to Feb. 15.		
Feb. 19.	Altering electric plant	Alameda, Cal.	Feb. 1
Feb. 19.	Reservoir	Geneva, N. Y.	Feb. 1
	Advertised, Eng. News, Feb. 1 to 15.		
Feb. 20.	School	Holyoke, Mass.	Feb. 1
	Advertised, Engineering News, Feb. 1.		
Feb. 20.	Electric lights	Kent, O.	Feb. 1
Feb. 20.	Water-works	Essex Junction, Vt.	Feb. 1
Feb. 20.	School building	Gatesville, Tex.	Jan. 25
Feb. 20.	Sewer bonds	Mingo Junction, O.	Jan. 25
Feb. 20.	Railway franchise	Los Angeles, Cal.	Jan. 18
Feb. 21.	Bridge	Chicago, Ill.	Jan. 18
Feb. 21.	Electric franchise	Vallejo, Cal.	Jan. 11
Feb. 22.	Electric lighting plant	Tarboro, N. C.	Jan. 25
	Advertised, Eng. News, Jan. 25 to Feb. 8.		
Feb. 23.	Pier extensions	Grand Rapids, Mich.	Jan. 25
	Advertised, Eng. News, Jan. 25 to Feb. 15.		
Feb. 23.	Water pipe, castings, etc.	Cincinnati, O.	Jan. 25
	Advertised, Eng. News, Jan. 25 to Feb. 15.		
Feb. 24.	Steel bridge	Hammond, La.	Jan. 18
Feb. 24.	Power house	San Francisco, Cal.	Feb. 1
Feb. 24.	Bridges (2)	Wilkesbarre, Pa.	Feb. 1
Feb. 25.	Water-works, etc.	Collinwood, O.	Jan. 25
Feb. 26.	Government building	Topeka, Kan.	Jan. 11
Feb. 26.	Residence	Sacramento, Cal.	Jan. 4
Feb. 26.	Sewer	Wichita, Kan.	Feb. 1
Feb. 26.	Asphalt paving	Wabash, Ind.	Feb. 1
Feb. 26.	Street improvements	Cincinnati, O.	Feb. 1
Feb. 26.	Dredging	Baltimore, Md.	Feb. 1
	Advertised, Eng. News, Feb. 1 to 15.		
Feb. 27.	Mining lease	St. Petersburg, Russia	Nov. 2
Feb. 28.	Railway (75 miles)	Matthews, Ind.	Nov. 23
Feb. 28.	Bridge	Vancouver, B. C.	Jan. 18
Feb. 28.	Vessel	Washington, D. C.	Jan. 25
Feb. 28.	Refrigerating plants	St. Louis, Mo.	Feb. 1
	Advertised, Eng. News, Feb. 1 to 22.		
Feb. 28.	Bridge	Kane, Pa.	Feb. 1
Feb. 28.	Pier extension	Manistee, Mich.	Feb. 1
	Advertised, Eng. News, Feb. 1 to 22.		
Mar. 1.	Power building	Indianapolis, Ind.	Jan. 25
Mar. 1.	Electric plant	Gentry, Tenn.	Jan. 25
Mar. 1.	Electric machinery	Melbourne, Victoria	Jan. 4
Mar. 1.	Plans municipal bldg.	Walsall, England	Jan. 11
Mar. 1.	Water-works	Ada, Minn.	Jan. 18
	Advertised, Eng. News, Jan. 18 to Feb. 1.		
Mar. 1.	Court house	Blue Ridge, Ga.	Jan. 18
Mar. 1.	Electric plant	Ada, Minn.	Jan. 18
	Advertised, Eng. News, Jan. 18 to Feb. 1.		
Mar. 1.	Extending building	Columbus, Ga.	Feb. 1
Mar. 1.	Sewer, paving, etc.	Bloomington, Ill.	Feb. 1
Mar. 2.	Electric plant	New London, Conn.	Feb. 1
	Advertised, Eng. News, Feb. 1 to 22.		
Mar. 5.	Dwelling, etc.	Buffalo, N. Y.	Jan. 18
	Advertised, Eng. News, Jan. 18 to Feb. 8.		
Mar. 5.	Steel bridge	Scranton, Miss.	Jan. 25
Mar. 5.	Building materials	Washington, D. C.	Feb. 1
	Advertised, Eng. News, Feb. 1 to 15 and Mar. 1.		
Mar. 7.	Steel bridge	Dassel, Minn.	Feb. 1
Mar. 9.	Pumping engines (4)	Cincinnati, O.	Jan. 25
	Advertised, Eng. News, Jan. 25 to Mar. 1.		
Mar. 10.	Railway	St. Michaels, Azores.	Jan. 11
Mar. 12.	Plans for hall	Belfast, Ireland	Nov. 23
Mar. 12.	Jail	Alexandria, Minn.	Jan. 25
Mar. 13.	Trunk sewer	Roswell, N. Mex.	Jan. 25
	Advertised, Eng. News, Jan. 25 to Feb. 22.		
Mar. 20.	Sewers	Wellsville, O.	Feb. 1
Mar. 23.	Bridge, Lorenzo Marquez	So. Africa	Dec. 14
Mar. 31.	Plans for police station	Chelmsford, Eng.	Jan. 18
Aug. 1.	Plans for bridge	Sydney, N. S. W.	Jan. 18
No date.	Ties and poles	Dover, Del.	Jan. 25
"	Electric plant	Beira, Portuguese E Africa	Jan. 18
"	Piling for gas plant	Newark, N. J.	Jan. 18
	Advertised, Engineering News, Jan. 18.		
"	Bridge (Howe truss)	Harlem, Mont.	Jan. 18
No date.	Iron (1,000 tons)	Cologne, Germany	Feb. 1
"	Electric r'y (40 miles)	Georgetown, Del.	Feb. 1

RAILWAYS.

BOSTON & MAINE.—It is reported that this company will have control of the Fitchburg R. R. L. Tuttle, Pres., Boston, Mass.——City Engineer Harrison, of Everett, Mass., has prepared plans to abolish the grade-crossings on Broadway in Everett, according to local papers.

CANADIAN PACIFIC.—Wm. J. Whyte, Mgr. Lines West, Winnipeg, Man., is quoted as stating that the company's plans for the proposed extensions in the west have not been decided on. The line from Winnipeg to Lac du Bousset, 20 miles, which was started last year, has been graded. Another branch, 50 miles in length, yet remains to be completed. Leaving the Souris branch, it runs southwest of Brandon, and then west to Moose Mountain. This road will be completed during the coming summer. A good deal of preliminary work has also been done in connection with the proposed double-tracking of the main line between Winnipeg and Fort William. Another piece of tracking to be completed is that on the branch from the Crow's Nest Pass Line into the North Star mine in British Columbia. From this point the road may be extended to Windermere, and then on to Golden along the Columbia River. The line from Robson to Midway through the boundary country, is about completed.

CENTRAL OF WEST VIRGINIA.—G. C. Sturgiss, Pres., Morgantown, W. Va., confirms our report in these columns of Dec. 14 that the surveys for this line from Morgantown to Belington, 65 miles, have been completed, the rights of way obtained, 10 miles graded, and 5 miles of track laid. Mr. Sturgiss states that the road will be pushed to a speedy completion.

CARBON COUNTY.—This company is reported to have been incorporated to build a railway in Carbon County, Utah. The capital stock is $600,000. W. G. Sharp, W. F. Colton and R. Harness, with others of Salt Lake City, are the incorporators.

CHATTAHOOCHEE & GULF.—C. H. Lawrence, Dothan, Ala., informs us that the contract for this line was let in Sept. to Hardaway, Jones & Co., and that 20 miles have been graded, 30 miles covered by grading outfit and 10 miles of track laid. The road will be 80 miles long, extending through Columbia, Dothan, Hartford and Elton.

CLEVELAND, BARBERTON & WESTERN.—Plans are reported to have been completed by this company, recently incorporated, to build its line to connect with the Northern Ohio Ry., at Fairlawn, on to the Valley R. R., near Hawkins. Chas. C. Benner is said to be interested.

DULUTH & NEW ORLEANS.—S. V. Wardall, Pres., Nevada, Ia., writes us that about 35 miles of right of way have been secured and the entire length of the proposed line, from Des Moines to Osage, Ia., 150 miles, has been surveyed. Capital for construction has been secured in New York. Sub-contracts will be let in February, the contract for the whole work has been let to Lawler & Reid, New York, who are now purchasing the necessary material. J. H. Lary, Ch. Engr., Nevada.

ERIE & WYOMING VALLEY.—A. D. Blackington, Ch. Engr., informs us that the date of letting contracts for constructing the line from Hawley, Pa., to Lackawanna, Pa., about 16 miles has not been decided on. The road will be conected with all individual breakers in Lackawanna and Wyoming valleys. Surveys have been made and the right of way secured. Geo. B. Smith, Pres., Dunmore, Pa.

FLORIDA.—Press reports state that H. C. McCreary and E. B. Whidden, of Gainesville, Fla., have secured a contract for constructing a railway from White Springs, on the Suwanee River, to Melbourne, about 9 miles distant.

HOUSTON, BRAZOS & NORTHERN.—Reports from Texas state that this company is preparing to begin the construction of its road. The company will begin work on five miles of road which will extend outside of the limits of the city of Houston, as soon as the weather permits. Neil P. Anderson, Fort Worth, Tex., and R. H. Hawley, Galveston, Tex., are interested. (See issue Dec. 7.)

JONESBORO, LAKE CITY & EASTERN.—A. J. Kerfoot, Gen. Mgr., Jonesboro, Ark., writes us that preliminary surveys have been made for the projected extension of this line from Leachville to Luxora, Ark., about 27 miles. J. E. Jones, Pres., Jonesboro, Ark.

KANSAS.—A. H. Jackson, Cy. Engr., Wichita, has submitted his estimate of the construction of the proposed railway from Wichita, Kan., to South McAlester, Ind. Ter., which is as follows: The estimate submitted is based on a 1% gradient, or 1 vertical to the 100 horizontal, which is, in round numbers, about 53 ft., per mile, for the maximum grade. The roadbed to be 14 ft. on top, slope 1 and ¼ to 1; cuts 20 ft. at bottom; slope 1 to 1 except in solid rock work, which will be ¼ to 1. Preliminary estimate for the construction and equipment of the Wichita and Southern railroad, from Wichita, Kan., to South McAlester, I. T.: Main line, 235 miles; siding, 23 miles; sixty steel rail—2,640 ties per mile; grubbing and clearing 75 miles at $300 per mile; right of way in Kansas at $1,000 per mile (65 miles); right of way in Indian Territory (170 miles), at $15; excavation and embankment, 3,280,000 cu. yds., at 10 cts; loose rock, 150,000 cu. yds., at 50 cts.; solid rock 100,000 cu. yds., at 65 cts. Bridging—Pile trestle, 16,110 lin. ft., at $6 per ft.; 22 100-ft. spans—plate girders, calculated weight of 22 100-ft. spans, 2,932,600 lbs., at 3 cts. per lb., erected and painted. Pier Masonry—First-class, 5,920 cu. yds., at $8; second-class, 2,280 cu. yds., at $6; box culverts, 224,000 B. M., at $25 per M.; ties for main line and sidings, 681,120 at 55 cts.; steel (60 rail), main line and sidings, 24,510 tons at $42; bolts, main line and sidings, 361,200 lbs. at 5 cts.; spikes, main line and sidings, 1,496,400 at 3 cts.; angle bars, main line and sidings, 2,724,480 lbs. at 3 cts; split switches, with timber, 130 at $124; cattle guards, 150 at $25; railroad crossings, with timber, 5 at $240; road and farm crossings, 300 at $4.75; whistling posts and section line crossing signs, 200 at $7.50; three-wire fence, with posts every 16½ ft., 100 miles, at $102; erection of telegraph line, 235 miles at $30; track laying and surfacing, including handling at material yards, 258 miles at $400. Depots and Buildings—First-class, 4 at $2,500; second-class, 12 at $1,000; section houses, 16 at $1,250; tool houses, 17 at $50; ten-stall engine houses, 3 at $8,750; 3 turn tables at $1,500; ten 50,000-gallon water tanks, with steam pumps, at $3,000; engineering superintendence, legal and incidental; total construction, $2,631,833; average cost per mile for construction of 235 miles, $11,200. Equipment—Four 50-ton passenger engines at $12,000; ten 80-ton freight engines at $16,000; four combination cars at $2,500; six passenger cars at $4,000; 100 box cars at $600; 200 coal cars at $450; 33 hand cars at $38; 17 push carts at $28. Total equipment, $393,730.

LAKE SUPERIOR & ISHPEMING.—J. F. Demling, Ch. Engr., Marquette, Mich., writes us that preliminary surveys are now being made for this line, which will extend through Presque Isle, northwestward 30 miles to Yellow Dog River. The line will be a branch to a tract of hardwood timber, but it is not certain as yet that the road will be built. There is no intention of extending to L'Anse. W. G. Mather, Pres.; W. R. Harris, Gen. Mgr., Marquette. (We noted incorporation in issue of Jan. 4.)

LOCKHART R. R.—John C. Cary, Pres., Lockhart, S. C., informs us that the capital for constructing this road of 14 miles, has been secured, and the road graded. Superstructure is now being erected. A. C. Olney, Ch. Engr.

MISSISSIPPI.—D. O. Summer, Fernwood, Miss., writes us that the projected railway from Fernwood to Tylertown will soon be built by the Fernwood Lumber Co., who will use the line principally as a logging road. Nothing further as regards the construction has been determined.

NEW YORK CENTRAL & HUDSON RIVER.—We are officially informed that the following construction is to be done this year by this company: All bridges on the road from New York to Buffalo, N. Y. are being or to be reconstructed. Contracts for 141 bridges, about 32,000 tons, have been let as follows: King Bridge Co., Cleveland, O., has the contract for building one structure at Spuyten Duyvil, which will be the largest; Elmira Bridge Co., Elmira, N. Y., 15 structures; Pennsylvania Steel Co., Steelton, Pa., 23; Pencoyd Iron Works, Philadelphia, Pa., 31; Phoenix Bridge Co., Philadelphia, Pa., 2; Buffalo Bridge & Iron Works, Buffalo, N. Y., 8; Union Bridge Co., New York, 10; Hilton Bridge Co., New York, 24; New Jersey Steel & Iron Co., Trenton, N. J., 12; Detroit Bridge & Iron Works, Detroit, Mich., 15. About 1,000,000 cu. yds. of ballasting, with gravel and broken stone will be completed this year. The company has ordered 1,500,000 ties to build 285 miles of road, for which 351,000 80-lb. rails have been ordered. Plans for a new station at Troy have been prepared, and 12 other new stations, together with one at Albany, are being constructed. An extension will be made to yards at Dewitt, and at Ravena, where a 19-stall engine house will be erected. There will be four mechanical trusses and four coal trusses at the Dodge coal stocking plant. Plans for grade crossings and a station at Schenectady have been prepared. The company is awaiting the approval of the improvements by the city. Estimated cost $800,000. At

Albany two grade crossings are being constructed, and at St. Johnsville, one; Shortville, one; Akron, one; West Seneca, one; Buffalo, one, and plans for two have been prepared. Others are contemplated. A connecting line 1½ miles long will be built at Hoffman. The line will connect with the West Shore, and will require heavy work. The progress at the Grand Central Station is very satisfactory. W. J. Wilgus, Ch. Engr., New York.

NORTHERN PACIFIC.—E. H. McHenry, Ch. Engr., St. Paul, Minn., informs us that the construction of cut-offs in Montana, recently reported to have been proposed by this line, has not been authorized. The reports were based on the construction of a line from Grantsdale up Bitter Root Valley, about 6 miles, which is 75% completed, the work being done by Wrenk Greenough, of Missoula, Mont. C. S. Mellen, Pres., St. Paul, Minn.; Chas. S. Bihler, Div. Engr., Tacoma, Wash.

OHIO JUNCTION.—The officers of this company at a recent meeting voted to build a line from Callery Junction, on the Pitts & Western, to Crows' Run, Rochester, and over the Beaver River to Bridgewater. J. H. Park, Pres., New Brighton, Pa.

OMAHA NORTHERN.—This company is reported to have filed a certificate of increase of capital stock at Sioux City, Ia., from $100,000 to $3,500,000. It is proposed to commence construction at an early date.

PENNSYLVANIA.—A Pennsylvania railway company is desirous of letting a contract for constructing a 17-mile connecting link of easy grade with two small bridges. The payment will be made in either mortgage bonds or by lease of the link, as stated in our advertising columns. Address Lock Box 118, Philadelphia, Pa.

PINE BLUFF & WESTERN.—N. N. Cargill, Pres., La-Crosse, Wis., informs us that this line, extending through Pine Bluff, Doylestown and Sheridan, Ark., about 25 miles, has been completed by Cork & Reeves, contractors, Little Rock, Ark., and that no further construction will be done at present.

PITTSBURG, SHAWMUT & NORTHERN.—F.O. Byrum, St. Marys, Pa., writes us that the surveys for the entire road, from Cool Spring, Pa., to Macedon, N. Y., via Brookvale, Shawmut and St. Marys, 200 miles, has been surveyed and the work is being done by the I. C. & I. Co., St. Marys. Wm. B. Parsons, Ch. Engr., 22 William St., New York; John Byrum, Pres., 160 Broadway, New York.

ROCHESTER & SUBURBAN.—This company has been incorporated in New York State with a capital stock of $120,000. The company is a reorganization of the Rochester & Irondequoit R. R. Co. Fred. Cook, Bernard Dunn and Max Brickner, of Rochester, N. Y., are interested.

SACRAMENTO & SAN JOAQUIN VALLEY.—C. A. Harp, Stockton, Ga., informs us that the preliminary surveys for this line have been completed and the right of way secured. The capital for construction has been secured and the contracts will be let about March 1. The line will extend through New Hope and Franklin, between terminals at Stockton and Sacramento, about 65 miles. John Cross, Pres., Los Angeles, Cal.

SALEM, PACIFIC COAST.—J. C. Talbott, Secy., Falls City, Ore., writes us that the surveys have been made and the rights of way obtained for this line, which will extend from Falls City through Dallas, Dixie, to Salem, about 25 miles. Contracts will be let about April 1.

SANTA FE & GRAND CANYON.—L. W. Goode, Pres., 11 Broadway, New York, informs us that 47 miles of this line to Anita Mining Camp is nearily finished, and that trains will be running by early February. About 300 men are now on the construction and ballasting work, and the road will be pushed to a speedy completion so as to accommodate the tourist travel from the Santa Fe system. Richards & Co. are doing the grading, Richard Coleman the track-laying, and the Tusayan Development Co. is also doing some construction work. The line will be 70 miles in length, extending from Williams, Ariz., to the Grand Canyon via Anita Mines. P. F. Randall, Ch. Engr., Williams, Ariz. (We noted other official information in the issues of Nov. 23 and Dec. 21.)

SHADY VALLEY.—We are informed that this line is to be an extension of the Abingdon & Damascus line, which has been surveyed and mostly graded from Abingdon to Damascus, Va., 14 miles. The lines will be 26 miles in all. Seven miles of the Shady Valley has been surveyed, and work will soon be started. The capital has been secured.

SHEFFIELD & TIONESTA.—The contract for constructing the line to connect with Sheffield, Pa., 24 miles long, has been let to Crage & Tench, 61 Terrace, Buffalo, N. Y. The company was incorporated Jan. 6, in Pennsylvania, with $235,000 capital stock. The trestle and heavy rock work will be done this winter, and the earth work will be started as soon as the weather permits. T. D. Collins, Pres., Nebraska, Pa.

SOUTH GEORGIA.—This company has applied for a charter to build a line about 26 miles in length. J. W. Oglesby, Pres., Quitman, Ga.

ST. LOUIS, IOWA & DAKOTA.—Reports state that this line, which is to be built this spring, will be about 467 miles long, touching some 50 towns en route. Surveys are said to have been made for the road which will bring St. Louis markets nearer Sioux City and the surrounding corn and grain belts nearer Chicago.

ST. LOUIS & SAN FRANCISCO.—We are officially informed that this company has completed arrangements to begin the construction of a line from Sapulpa, in the Creek Nation, Ind. Ter., through the Chicasaw Nation, to Red River, on the Texas state line, terminating at Denison or Sherman, about 200 miles, and possibly reaching both points. The contract for the entire line will be awarded to Johnson Bros. & Faught, of St. Elmo, Ill. The road will be rock ballasted, and will be built with 75-lb. steel rails. The capital for construction is now being secured from trust companies. J. F. Hinckley, Ch. Engr., St. Louis.

TENNESSEE.—Reports from Chattanooga state that the owners of iron ore mines at various points on the ridge beginning at St. Elmo and extending into Georgia and dividing Chattanooga valley from Dry valley, are securing right of way for the line of railroad which they propose to build along the base of this ridge down Dry valley to a point about a mile distant from Lafayette, Ga. This road will be built to haul iron ore from a section in the iron ore deposits, where no railway penetrates. Building operations will be begun as soon as the right of way is secured, probably in March.

TOLEDO & OHIO CENTRAL.—A contract between the city of Columbus, O., and this company has been signed, whereby the company will begin, within 10 days, the construction of the West Side levee.

TRANSYLVANIA.—Wm. Ramsey, Brevard, N. C., writes us that the contracts for extending this line from its present terminus at Brevard to Eastatse, N. C., the name of which will be changed to Toxaway, about 10 miles, has been let to J. F. Hays, Brevard, who will use local labor. All rights of way have been obtained and capital secured. W. P. Potter, Pres., Bakewell Bldg., Pittsburg.

VANCOUVER & LULU ISLAND.—Bids were received on Jan. 29, according to reports, for clearing the route of this road from Fairview, B. C., to north arm of Fraser River.

VELASCO, SUBURBAN & BELT LINE.—E. D. Dorchester, Pres. and Ch. Engr., Velasco, Tex., informs us that 3½ miles of this line has been built and rails have been received for another 3½ miles, which will complete the line. The survey has been completed, and the right of way obtained. The work will be done by the day and will be finished before Sept. 1.

VICTORIA & SYDNEY.—The council of Victoria, B. C., has been asked, according to reports, to take $500,000 of this company's stock, so as to enable the company to extend its line at a cost of $2,000,000. The remainder will be furnished by the company.

VIRGINIA & SOUTH WESTERN.—C. K. Mount, Supt. of Construction, Elizabethtown, Tenn., informs us that all surveys and grading for this line, extending through Elizabethtown, Fish Springs, Butler and Mountain City, about 37 miles long, with a five-mile branch to Stony Creek, have been completed, and track has been laid from the junction with the main line at Elizabethtown to the first river crossing, 11 miles, and from the junction of Stony Creek extension at mile post No. 5 to the ore mines, 5 miles distant. Four bridges are to be constructed within 60 days, all the construction being done by the company under the supervision of the chief engineer and the superintendent of construction. The road will be completed and ready for operation by May 1. Ore washing plants are also being constructed. Geo. L. Carter, Pres., Cornelius Shields, Vice-Pres. and Gen. Mgr., Bristol, Tenn.

WASHINGTON & RICHMOND.—This company has been incorporated with $10,000,000 capital stock to build a road from a point on the Potomac River to Richmond, Va., W. Brydon Tennat, J. J. Collier and Herman Rickett are interested.

STREET AND ELECTRIC RAILWAYS

BROOKLINE, MASS.—The selectmen have granted the Boston Elevated Co. locations on Boylston, Cypress and Harvard Sts., and Brookline Ave., in this city.

LEOMINSTER, MASS.—Edward F. Blodgett informs us that the officers of the Mt. Wachusett R. R. Co. have not been selected. The incorporators have petitioned the Mt. Wachusett Commissioners for a location, and have also prepared a bill for the next legislature. (See issue Jan. 18.)

MIDDLEBORO, MASS.—Local papers state that the Fall River, Myrichs & Middleboro Air Line St. Ry. Co. has been organized to build a line between Middleboro and Fall River, about 22 miles. The company will be capitalized at $50,000. Byron B. Grinnell, Frank A. Rouse, Taunton, and V. W. Davis, Freetown, Mass.

DANIELSON, CONN.—The Providence & Danielson Ry. Co. is reported to have been incorporated with $300,000 capital stock, to build an electric railway between Providence and Danielson. Geo. W. Prentice, Franklin P. Owen and Joel Hay are interested.

NEW HAVEN, CONN.—The Connecticut Lighting & Power Co., which controls the Waterbury Traction Co. and the New Britain trolley system, has partly completed surveys for a trolley line from Waterbury to Southington, about 2 miles. An extension of the third rail system from Bristol to Waterbury is probable.——The Fair Haven & Westville Co. proposes to make extensive improvements throughout this city to its system, by double-tracking, etc., according to reports.

WASHINGTON, N. J.—It is reported that an electric road will be built between Easton and Lake Hopatcong, to carry freight and passengers. The route is now being surveyed. A private right of way will be used. The project is backed by capitalists, and the chief promoter is Thomas A. Edison, Menlo Park, N. J.

LINGLESTOWN, PA.—We are informed that the survey for the Linglestown & Progress Electric Ry. Co. has been made, and a private right of way obtained. The company has several offers of capital to push the project. The line will extend through Linglestown, Progress to Kittening Mountain, about 8 miles.

McKEESPORT, PA.—It is reported that contracts will soon be let by the Greensburg, Jeanette & Pittsburg St. Ry. Co. for constructing an electric line from Irwin to McKeesport. New cars are now being purchased by the company. C. L. Bruiser, Mgr.

MASONTOWN, PA.—J. P. Brennen, Pres., Masontown, informs us that the contract for constructing the Masontown & New Salem R. R., 10 miles, has been let to F. H. Clements & Co., Philadelphia, and that surveys have been completed and the capital secured.

PHILADELPHIA, PA.—We are informed that the right of way for the Philadelphia & Merion Electric R. R., to be about 6½ miles in length, has been obtained, and the survey made. The contract for grading has been let to the Merion Construction Co., 531 Odd Fellows' Temple, Philadelphia, and about one mile of the road has been graded. Other contracts will be let in the spring. Wm. G. Hoey, Pres., Philadelphia.

PITTSBURG, PA.—Local papers state that plans are being prepared for an elevated structure along Liberty Ave. at 33rd St., to be built by the Consolidated Traction Co. and the Pittsburg Junction R. R. The structure will cost about $100,000.

DOVER, DEL.—John D. Hawkins informs us that surveys are being made for the extension of the Dover & Bayshore Ry. Co.'s electric line from Dover via Leipsic to Woodland Beach, about 13½ miles, for which the Levy Court recently granted permission, as noted in these columns of Jan. 11. Rights of way have been secured and the contracts will be let before Feb. 10. The capital will be ready as soon as the survey and estimate have been completed. Joseph Hancock, Pres., 17th St. and Columbus Ave., Philadelphia. H. M. Herbert, Ch. Engr., Boundbrook, N. J.

GEORGETOWN, DEL.—Bids are asked by the Delaware General Electric Ry. Co. for constructing its line from Milford to Smyrla, via Frederica, Camden, Dover and Leipsic, about 40 miles, for which surveys have been made and right of way obtained. Work to begin Feb. 22. R. C. White informs us that the construction capital is assured. Leo. Belmont, Pres.; Harris & Damon, Ch. Engrs., Philadelphia, Pa.

FREDERICK, MD.—The Chesapeake & Northern Ry. Co. is reported to have filed articles of incorporation, with $500,000 capital stock. The company will probably build an electric road from a point on the Chesapeake Bay through Rockville, Gaithersburg, Frederick, Thurmont and Emmitsburg to a point on the boundary between Maryland and Pennsylvania. Chas. S. Howard, Edgar L. Miller and Harry S. Krise are interested.

NORFOLK, VA.—Wm. W. Shelton informs us that the Hampton Roads Ry. & Electric Co's line from Old Point Comfort to Newport News, via Hampton, about 9 miles, will be built at once. (See issue Jan. 18.)

ATLANTA, GA.—Local papers state that the Atlantic & Western Ry. & Power Co. has been granted a charter to build an electric road between Austell and Douglasville, Ga., about 45 miles. They will be capitalized at $[illegible]. F. S. Monett, Columbus, O., and W. J. Northern, Atlanta, are interested.

HUNTSVILLE, ALA.—Press reports state that the Huntsville Ry., Light & Power Co. will probably build an electric road from this place to North Huntsville. John H. Waters, Treas.

LOUISVILLE, KY.—Local papers report that the organization of a company to be known as the Louisville, Fairfield & Mt. Washington Electric Ry. is being agitated by Wm. H. Ogan, Cleveland, O., H. P. McIntosh, James McKenna, Fairfield, and others. The road will be about 32 miles long, and will cost about $700,000. A survey is now being made by D. L. Scott, Ch. Engr.

AKRON, O.—At a recent meeting of the stockholders of the Ashland & Wooster Ry. it was decided to begin the construction of a 20-mile link between the east and west divisions as soon as the weather permits, to be completed in two years. Horace B. Camp, Pres.; Thos. F. Walsh, Vice-Pres.

ASHLAND, O.—Local papers state that an electric line between Mansfield and Ganges, where a branch will be built to Shelby, and another to Savannah is proposed. The right of way between Ashland and Savannah has been secured. James Backhouse is interested.

BUCYRUS, O.—Israel A. Kelsey, Pres., Room 213, First National Bank Bldg., New Haven, Conn., writes us that there is no definite intention at present of extending the Ohio Central Traction Co.'s line from Bucyrus to Upper Sandusky.

CLEVELAND, O.—F. T. Pomeroy, Gen. Mgr., Cleveland, informs us that the line of the Lorain County Ry., extending from Elyria to North Amherst, is nearly completed, and will be in operation by Feb. 1. The road from North Amherst to Lorain will be in operation about April 1. The road will be about 13 miles long. The motive power will be electricity. Parks Foster, Pres., Elyria, O.——The question of granting street railway companies an extension of franchises is being considered by the council.

COLUMBUS, O.—The Columbus, London & Springfield Ry. Co. has been incorporated with $1,000,000 capital stock to build an electric line from Columbus to Springfield, 50 miles, and to furnish power and light. John G. Webb, John M. Good and Emmet Thompson, Columbus, are interested.——The Lancaster & Newark Traction Co. has been incorporated, according to reports, to build a street railway; capital stock, $25,000. E. Rowles, E. Kiefer and S. B. Campbell are interested.——It is reported that the Zanesville, Adamsville & Coshocton Electric Ry. Co. has been incorporated, with $10,000 capital stock, to build an electric road from Zanesville to Coshocton. J. B. Wilson, Wm. O. Littick, and F. H. Southard.——The Dayton & Troy Electric Ry. Co. was incorporated here on Jan. 22, with $30,000 capital stock, to build an electric line between these cities. J. M. Wilson, W. L. Caten and Thos. B. Hermann are interested.

DAYTON, O.—Perry Sebold, Ch. Engr., Dayton, informs us that the contracts for constructing the Columbus & Lancaster Traction Co.'s line, 30 miles, will be let this spring. The capital is not entirely secured. Dennis Dwyer, Pres., Dayton. (See issue of Jan. 4.)

FAIRPORT H., O.—The Fairport & Youngstown Ry. Co., of Ashtabula, has been incorporated with a capital stock of $30,000, to build a railroad. R. F. Smith, C. T. Brooks and J. McCrea are interested.

SANDUSKY, O.—The Sandusky, Monroesville, Bellevue & Norwalk Traction Co. has been incorporated by H. W. Hughes, W. W. Graham, W. E. Guerin and others, with $600,000 capital stock, to build an electric road, 27 miles long, from Sandusky to Norwalk by way of other towns.

TOLEDO, O.—F. E. Seagrave, Mgr. the Toledo & Western Ry. Co., Toledo, informs us that the surveys and the work of obtaining the right of way for this line is nearly completed, and the capital for construction has been secured. The contracts for the line will be let before April 1. The road will be an electric, extending north and west from Toledo, about 50 miles, touching nine different towns. Frank T. Oakley, with a party, is now completing the surveys. G. E. Herrick, Pres., Cleveland.

BLOOMINGTON, IND.—Edwin S. Brodix, Pres., Bloomington, informs us that surveys for the Columbus, Bloomington & Terre Haute Ry. have been completed, and that propositions for capital are being considered. Mr. Brodix will receive competitive bids for constructing the line which will be 91 miles, extending to Columbus, Bloomington and Terre Haute. The contracts to be let by summer. Plans and estimates are now ready for inspection. (See incorporation notice under Railway columns in the issue of Jan. 25.)

HUNTINGTON, IND.—Local papers state that a company is being organized to build an electric road from Huntington to Portland. The company will be capitalized at $10,000, and the road will cost about $400,000 to build. Z. T. Dungan, Mayor; J. Fred. France, and Ross Smith are interested.

GRAND RAPIDS, MICH.—Local papers report that the Grand Rapids, Holland & Lake Michigan line is being organized to build an electric railway from this city to Holland, the construction to begin this spring. The new company when incorporated will issue about $500,000 to build the line. Jenj. S. Hanchett, Secy., the Consolidated Traction Co., is interested together with local capitalists.

HOLLY, MICH.—S. W. Smith is reported as stating that work will commence early this spring on the Flint-Pontiac Electric road, which will pass through several other towns, to be about 35 miles long. A private right of way will be used, and branches will be constructed to Holly and Fenton.

MENOMINEE, MICH.—The names of Ira Carley, Ingalls, and G. T. Werline, Nadeau, are mentioned in connection with the proposed electric railway through Menominee county to Powers. Power plants will be built in Menominee and Powers, if the line is built, which is probable, according to reports. The project will cost about $200,000.

YPSILANTI, MICH.—A franchise has been granted by the township board to H. P. Glover and R. W. Hemphill for an electric road from this place to Milan.

ALTON, ILL.—J. F. Porter, Pres. and Ch. Engr., Alton, informs us that work is under way on the Alton Ry., Gas & Electric Co.'s line, 2 miles, and that ties have been purchased. The company is doing its own construction.

SYCAMORE, ILL.—Edwin B. Magill, Pres., Sycamore, informs us that the right of way for the Sycamore & DeKalb Electric Ry. Co.'s electric line, extending from Sycamore to DeKalb, also to the State Normal school, 8 miles long, have been secured, and that the contracts will be let for construction within 60 days. W. H. Schott, Ch. Engr.

IOWA CITY, IA.—It is reported that an electric road between this city westward is proposed. The projected road will be of standard gage, about 25 miles long, and will do a freight and passenger business.

OLATHE, KAN.—J. E. Tryan, Kansas City; J. B. Bruner, Olathe, and others have been granted a franchise by the council to build an electric street railway between Olathe and Kansas City, for a period of 25 years, the work to begin within three months, and to be completed in two years. An extension to Gardner, 8 miles, is proposed.

NEW FLORENCE, MO.—Howard Ellis, Secy., writes us that the permanent survey for the New Florence, Belleflower & Middletown Ry. will soon be made, and contracts will be let in early spring. The line will be 22 miles long. Capital has been secured. J. W. Schowingerdt, Pres., Belleflower, Mo. (See issue Nov. 30.)

TACOMA, WASH.—The Dyea & Chilcoot R. R. Co. is reported to have been incorporated, with $50,000 capital stock, to build an electric road from Dyea to Chilcoot Pass, Alaska, a distance of 17 miles; a tunnel is proposed under Chilcoot Pass, 3,700 ft. M. King, Pres.; T. B. Wallace, Secy., Tacoma.

PUEBLO, COLO.—J. F. Vail, Gen. Mgr., Pueblo, informs us that all proposed improvements to be made by the Pueblo Traction & Electric Co. have been contracted for. M. D. Thatcher, Pres.; R. A. Monatt, Ch. Engr., Pueblo.

SALINAS, CAL.—F. A. Abbott, Cy. Clk., informs us that the bids received on Jan. 15 for the purchase of a street railway fralchise were not opened, and the date for receiving proposals has been postponed until Feb. 19.

ELECTRIC LIGHT AND POWER

PORTSMOUTH, N. H.—The question of building a municipal plant is being discussed.

NEW LONDON, CONN.—Bids are asked until March 2 for furnishing the materials and for erecting an electric plant, as stated in our advertising columns. Maj. S. S. Leach, U. S. Engr.

SKANEATELES, N. Y.—F. L. Rogers, of Syracuse, has prepared an estimate for a plant to cost about $13,000.

CALDWELL, N. J.—C. A. Marble, Supt., writes us that the proposed plant will not be built for several months.

CAPE MAY, N. J.—The question of building a municipal plant is being discussed.

ALTOONA, PA.—Harvey Lluton, Cy. Engr., writes us that there is no immediate prospect of an additional plant.

CORRY, PA.—Bids are asked until Feb. 12 for furnishing 65 1,200-c. p. enclosed arc lights and 50 16-c. p. incandescent lamps. G. D. Gilbert, Cy. Engr.

GREENSBURG, PA.—It is stated that the Westmoreland Electric Co. will erect a plant to cost about $150,000.

HAGERSTOWN, MD.—This city will issue $60,000 in bonds for a municipal plant.

ST. MICHAELS, MD.—The people have voted to issue $12,000 in bonds for a plant and water-works.

SNOW HILL, MD.—The question of a municipal plant is being discussed, according to reports.

CHARLESTOWN, VA.—Councilmen Weller, Hough and Phillips have been appointed a committee to ascertain the cost of a plant.

SHEPHERDS, VA.—It is stated that Dr. A. S. Reynolds is investigating the cost of a plant.

ATLANTA, GA.—The Commercial Telephone & Telegraph Co., 603 Prudential Bldg., is said to be in the market for a lighting outfit.

LEXINGTON, GA.—Reports state that T. G. Lester is interested in a company which proposes to erect a plant.

UNION POINT, GA.—The Union Mfg. Co. wants a 250 to 300-light dynamo for 20-c. p. incandescent lamps.

TALLAHASSEE, FLA.—Bids are asked until Feb. 13 for erecting a lighting plant; check, $500. F. W. Armstrong, Chn. Electric Light Com.

OPELIKA, ALA.—H. C. Davidson writes us that bids are now open for constructing a plant for the Alabama Electric Light & Power Co., to cost about $30,000.

CRYSTAL SPRINGS, MISS.—C. A. Rhymes, Chn. Council Com., writes us that the committee will want two 60-in. × 16-ft. boilers, one 100-HP. engine, one 1,000-light dynamo, and one 20-arc light dynamo; contracts will be let some time in the latter part of February.

WINONA, MISS.—It is stated that the Blackston Mercantile Co. wants bids on a 2,500-light plant.

YAZOO, MISS.—The question of a municipal plant and water-works is being discussed. J. S. Williams, Chn.Com.

JENNINGS, LA.—R. S. Stearns writes us that he will use a 125-HP. engine and boiler for his plant, capacity about 800 lights, to cost about $15,000.

LAKE CHARLES, LA.—G. T. Rock writes us that plans will be prepared in about 60 or 90 days for a plant, water-works and sewers.

NASHVILLE, TENN.—J. M. Head, Mayor, writes us that the legislature has authorized the issue of bonds for a plant to supply 300 2,000-c. p. arc lights and 10,000 16-c. p. incandescent lamps, to cost about $150,000. The council has not yet passed its ordinance, but the work will probably soon be taken up.

KENT, O.—Bids are asked until Feb. 20 for furnishing 64 2,000-c. p. lights. G. A. McMahon, Chn. Light Com.

RICHMOND, O.—The question of building a municipal plant, to cost about $40,000, is being discussed.

SANDUSKY, O.—The council is said to be considering the question of a municipal plant.

INDIANAPOLIS, IND.—The Jenny Electric Light & Motor Co., D. M. Parry, Pres., has applied for a franchise for wiring the northern part of the city.

MUNCIE, IND.—The council has decided to make extensive repairs to the plant.

ALBION, MICH.—C. H. Burnett writes us that the matter of establishing a plant has been given up entirely.

HOWELL, MICH.—The Common Council will receive bids at its next meeting for a plant.

LUDINGTON, MICH.—An election will be held Feb. 5 to vote on the question of issuing $25,000 in bonds for a plant.

SAGINAW, MICH.—W. B. Baum, Mayor, writes us that the question of building a municipal plant will be voted on about May 1.

BLUFFS, ILL.—C. F. Tonn, Chn., writes us that the Bluffs Scott Co. will want an 80-HP. boiler, a 65-HP. engine, one 550-light dynamo with generator and poles, lamps, etc. Bids will be asked about April 1; plant to cost about $3,000.

RACINE, WIS.—The council has directed the city clerk to advertise for bids for lighting the city from July 1 for one, two or three years.

MUSCATINE, IA.—E. F. Richman writes us that a committee has been appointed to perfect a plant for the Muscatine & Moscow Canal. It will be some time before work is started.

ARLINGTON, MINN.—F. W. Jurner, Village Recorder, writes us that this town will purchase an 80-HP. and a 60-HP. engine, feed pump, heater, etc., and will erect a building for a plant, to supply seven 2,000-c. p. arc lights and 400 16-c. p. incandescent lamps. Bids will be received after March 1.

CHASKA, MINN.—The people have voted in favor of issuing $7,000 for a municipal plant.

CLEAR LAKE, MINN.—The Clear Lake Electric Light & Power Co. will increase its stock from $10,000 to $20,000, and double the capacity of its plant.

ELBOW LAKE, MINN.—O. G. Sanden, Pres. Village Council, writes us that the question of issuing bonds for a plant to cost about $3,000 will be voted on in March.

LONG PRAIRIE, MINN.—The people have voted to issue $13,000 in bonds to purchase the plant, owned by private parties.

OSAKIS, MINN.—The question of issuing bonds for a plant and water-works will be voted on at the spring election.

KANSAS CITY, MO.—It is stated that Alderman J. E. Jewell will introduce an ordinance to provide for building a municipal plant.

ALCESTER, S. DAK.—The question of erecting a plant and water-works is being discussed.

LARAMIE, WYO.—The trustees have granted a 20-year franchise to the Rawlins Electric Light Co.

SEATTLE, WASH.—W. V. Rinehart, Pres. Cy. Council, writes us that a charter amendment, authorizing the erection of a plant will be voted on March 6. Plans will be prepared after vote is taken.

ALAMEDA, CAL.—Bids are asked until Feb. 19 for work to be performed at the municipal plant. B. B. Lamborn, Cy. Clk.

LOS ANGELES, CAL.—It is stated that an election will soon be held to vote on the issue of bonds for building an auxiliary plant.

REDDING, CAL.—It is stated that W. S. Beale, Bakersfield, and D. F. Barber, of the General Electric Co., of San Francisco, contemplate the erection of an 8,000-HP. plant and the construction of a dam across the Pit River, to cost about $350,000.

SAN FRANCISCO, CAL.—Bids are asked until Feb. 24 for erecting a power house, electric machinery, etc. Deputy Quartermaster General J. M. Marshall, Chief Q. M.

MORRISBURG, ONT.—J. J. Ashworth is preparing plans for a plant, to cost about $25,000.

PALMERSTOWN, ONT.—S. Caswell, Clerk, will receive bids for an all-night service for this town.

BRIDGES.

DEXTER, N. Y.—The contract for constructing the new bridge over the arm of the river between Bridge St. and Fish Island has been awarded to the Oswego Bridge Co., at $7,000. The structure will be 130 ft. long.

GOWANDA, N. Y.—Reports state that the contract for taking down the Kinzua viaduct and replacing it with a steel structure has been let to Gratten & Jennings, Buffalo.

NEW YORK, N. Y.—Contracts have been let by the New York Central & Hudson River R. R. for 141 bridges, in New York state, as noted under Railways.

TROY, N. Y.—A bill has been introduced in the legislature authorizing the United Traction Co. to construct a bridge over the Hudson River from Broadway, this city, to Centre Island, in the Hudson River, and thence to Broadway, in Watervliet.

PATERSON, N. J.—Local papers state that a bridge is proposed by the freeholders to cost $6,000. The structure will extend from the Little Falls Road at West 13th St. to West Side Park, and will be 253 ft. long, having a center span 125 ft. long.

KANE, PA.—Bids are asked until Feb. 28 for constructing a bridge over the Philadelphia & Erie R. R. tracks, on the line of Poplar St. J. E. Mullin, Secy.

MEDIA, PA.—We are officially informed that two new bridges are being erected over Basin Run, on the Central Division of the Philadelphia, Wilmington & Baltimore R.R. Bridge No. 61 will consist of half-through girders, 96 ft. long, to replace the present Howe truss structure; bridge No. 62 will be a through-riveted truss, 123 ft. long, and will replace a through wooden Howe truss. Both new structures were designed by W. A. Pratt, Engr. of Bridges, and will be erected by the division force of the company. The Darby Creek viaduct, on the same division, is also being lengthened by the addition of 80-ft. deck girders. **H. C. Smith, Div. Engr.**

PITTSBURG, PA.—E. M. Bigelow is reported to have plans for the proposed bridge for the elevated tracks of the Consolidated Co. over the grade crossings of the Junction R. R. The structure will cost about $100,000.

WILKESBARRE, PA.—Bids are asked until Feb. 24 for constructing two bridges, one with four 40-ft. spans, 8-ft. rise of masonry, with a double track for a street railway, 27 ft. wide, on side, of 24-in. 80-in. I-beams; the other with two stone arches, 40-ft. spans, 8-ft. rise of masonry, 76 ft. wide on one end and 60 ft. at the other, a railway to go on arches. H. S. Smith, Des. Engr., 79 Coal Exchange; H. H. Welles, Jr., 33 Coal Exchange, Wilkesbarre.

CLEVELAND, O.—H. P. Ells, Pres., Atchison & Eastern Bridge Co., Cleveland, O., writes us that plans for the reconstruction of the present bridge at Atchison have been prepared by Geo. S. Morison, 25 Wall St., New York. No contracts have been let.

BELLAIRE, O.—Reports state that the proposed new bridge to be constructed at this place by the Baltimore & Ohio R. R. will cost about $455,000. J. E. Greiner, Engr. Bridges, Baltimore.

CLEVELAND, O.—Bids are asked until Feb. 7 for constructing two masonry arches over Doan Brook, at Wade Park. C. W. Pratt, Ch. Engr., 220 Hickox Bldg.

SPRINGFIELD, O.—The question of building a bridge over Mad River, at Owl Town, is being considered, according to reports.

ZANESVILLE, O.—Local papers state that the proposition of repairing the Y-bridge is being agitated by the citizens of this place. The necessary improvements to the structure would cost about $5,000. Wm. Dunn, County Engr.

THREE RIVERS, MICH.—An election will be held Feb. 5 to vote on the question of issuing $7,000 in bonds for constructing an iron or steel bridge over the St. Joseph River, to connect the south and west sides of the city.

CHICAGO, ILL.—Local papers state that plans for a masonry viaduct to be built by the Pennsylvania R. R. at Randolph St. have been agreed upon by the city and the railroad engineering bureaus. W. A. Pratt, Engr. Bridges, Philadelphia Pa.

DASSEL, MINN.—Bids are asked by the county commissioners until March 7 for constructing a tubular steel bridge over Collingwood Lake Creek, according to reports.

ISANTI, MINN.—The contract for constructing a bridge over Rum River at this place has been let to the Gillette-Herzog Co., Minneapolis, at $2,900.

KANSAS CITY, MO.—Plans for the new bridge that the Metropolitan St. Ry. Co. will build over Agnes on the Northeast Electric Line, have been completed. The structure will have four tracks, a roadway and sidewalk, and will be about 400 ft. long. Estimated cost, $85,000. W. H. Holmes, Pres., states that the construction of the abutments will begin at once.

DEVIL'S LAKE, N. DAK.—Plans are being prepared by W. S. Russell for a new bridge over the lake, to be 140 ft. long, 70 ft. wide, to have a pontoon draw, with a 50-ft. three bent pier at either end. The structure will cost about $6,700.

RANDOLPH, UTAH.—Bids are asked by the county commissioners until Feb. 5 for swinging a steel bridge on its piers over Bear River, near the old bridge crossing.

RED BLUFF, CAL.—Bids are asked until Feb. 7 for constructing the Hatch Road in district No. 1 and five wooden bridges thereon. W. A. Fish, Clk.

CHARLOTTETOWN, P. E. I.—Bids are asked by the Public Works Department until Feb. 14 for constructing a new steel span at South River bridge, Murray Harbor South.

BUILDINGS.

BOSTON, MASS.—The following bids have been received by the school committee for a new primary school at Paker, Willis and Caldwell Sts.: E. T. Aldrich, Chn. Bldg. Com: Conners Bros., 17 Otis St., $66,500; J. S. Jacobs & Son, 6 Herald Bldg., $64,443; A. MacDonald, 17 Otis St., $62,539; H. P. Cummings & Co., 178 Devonshire St., $61,938; Kiening & Strout Bros., 166 Devonshire St., $71,716; Mack & Moore, 22 Chapman Place, $59,900; Isaac Weaver, Equitable Bldg., $54,129; Fessenden & Libby Co., 34 School St., $57,292; W. A. & H. H. Root, 166 Devonshire St., $58,900.——An 11-story building will be erected at Boyston and Exeter Sts., by the Lenox Hotel Trust, to cost about $1,000,000. G. H. Shaw and E. Bangs are said to be interested.

EVERETT, MASS.—It is stated that a committee will be appointed to secure plans for a new school house and police station.

HOLYOKE, MASS.—The board has appropriated $65,000 for a school building in the Highlands. W. B. Reid, Arch., 280 High St.

HOLYOKE, MASS.—Bids are asked until Feb. 20 for a heating and ventilating system for the Highlands Grammar School building, as stated in our advertising columns.

WORCESTER, MASS.—The aldermen have appropriated $30,000 for a new high school building.

PROVIDENCE, R. I.—The Old Star Bldg., at Dyer and Custom House Sts., was burned Jan. 22; reported loss about $60,000.

BRIDGEPORT, CONN.—The board of education has asked for $61,500 for a new school house.

GREENWICH, CONN.—Reports state that Wm. Rockefeller, Jr., will erect a residence on the Secor farm this spring.

FREDONIA, N. Y.—Fire destroyed several buildings Jan. 25, loss about $300,000; the power house of the Dunkirk & Fredonia Street Car Co. was burned.

LONG BEACH, N. Y.—It is stated that a new company will purchase the right of the Long Beach Association, of which P. K. Ames is the receiver and spend about $1,000,000 in improvements.

NEW YORK, N. Y.—Bids are asked by the fire department, 157 E. 67th St., until Feb. 7 for a fire house at 138th St., near Cypress Ave., Bronx, J. J. Scannell, Comr.; and by the department of correction, 148 E. 20th St., for erecting a portico to the entrance of the new city prison.

NEW YORK, N. Y.—Bids are asked until Feb. 13 by the building committee of the board of education, 59th St. and Park Ave., for erecting public school No. 78, at Winfield, Borough of Queens, and completing public school No. 11, Borough of Queens.——Plans have been filed by C. B. Rouss, 632 Fifth Ave., for alterations to building, 549 to 555 Broadway, to cost about $250,000. W. J. Dilthey, Arch., 3 Union Square; by T. S. Quinn, 2740 Broadway, for two 5-story brick flats at 134th St., near Lenox Ave., to cost about $40,000. W. O. Tate, Arch., 1238 Madison Ave.; by J. D. Karst, Jr., 2051 8th Ave., for four 5-story brick flats at 542 to 548 W. 47th St., to cost about $80,000. Louis Korn, Arch., 37 Maiden Lane.

SCHENECTADY, N. Y.—A. W. Fuller, 97 State St., Albany, has prepared plans for remodelling the dormitory of Union College. Rev. A. V. V. Raymond, Pres.

SYRACUSE, N. Y.—Alderman E. J. Mack has plans for a convention hall, to cost about $20,000.

TROY, N. Y.—Dr. E. D. Ferguson, Chn. Executive Com., has asked for a new nurses home, to cost about $25,000; A. R. Cluett, Chn. House Com.

TROY, N. Y.—Plans have been prepared for a new station at Troy, one at Schenectady, and at about 12 other places, for the N. Y. C. & H. R. R. R. Co. Other extensive improvements are contemplated by the road, as stated in our "Railways" columns. W. J. Wilgus, Ch. Engr.

ATLANTIC CITY, N. J.—Capt. J. L. Young is having plans prepared for a 7-story brick apartment house, 205 × 137 ft. on the Board Walk.——A company in which W. B. Huey, of Philadelphia, is interested will erect a hotel, to cost about $500,000.

HOBOKEN, N. J.—Fire destroyed the foundry of Frederick Verdon and the Floyd Oilcloth Factory, Jan. 28; loss, about $60,000.

ORANGE, N. J.—The library trustees have accepted the plans of Busser & Albro, East Orange, for a library building.

PATERSON, N. J.—Bids are asked until Feb. 12 for building fixtures, etc., for the court house. G. W. Bothyl, Clk. Bd. Comrs.

BUTLER, PA.—The school board will have plans prepared soon for a new school building to cost about $50,000.

CARLISLE, PA.—The board of trustees of Dickinson College will erect a new dormitory. G. E. Reed, Pres.

DUQUESUE, PA.—The plant of the Duquesne Mfg. Co. on 26th St., was recently destroyed by fire; loss about $50,000.

EASTON, PA.—Chas. W. Bolton, 1007 Witherspoon Bldg., Philadelphia, writes us that no contracts have yet been let for dormitories for Lafayette College.

PHILADELPHIA, PA.—Plans are being prepared by A. E. Yarnall, 14 South Broad St., for a 6-story apartment house in West Philadelphia, by T. P. Chandler, 328 Chestnut St., for a railroad station for the Pennsylvania R. R., at Germantown Junction, to cost about $150,000, by C. P. Berger, 14 South Broad St., for a 7-story brick apartment house at 13th and Walnut Sts. J. A. Paterson & Co., Agents.——The plant of the Angora Mfg. Co., at Angora, was destroyed by fire Jan. 26; loss about $150,000.

PHILADELPHIA, PA.—The board of education will spend about $100,000 in completing the Boys' High-School annex at Broad and Green Sts., and will erect a new school house at Tacony, to cost about $25,000.——Bids are asked until Feb. 6 for furnishing building materials. W. B. Land, Secy. Bldg. Comrs.

PITTSBURG, PA.—It is stated that bids will soon be asked by the Western University of Pennsylvania for erecting a new observatory. T. E. Billquist, Arch., 35 Stevenson Block; W. J. Holland, Pres.

WEST CHESTER, PA.—It is said that the Pennsylvania R. R. Co. will erect a steel freight shed 1,000 ft. long, to cost about $125,000.

WILMINGTON, DEL.—The contract for improvements to the high school building to cost about $35,000 has been let to H. G. Miller.

BALTIMORE, MD.—St. John's Independent Methodist Church will erect a church building at St. Paul and 27th St., to cost about $40,000; B. B. Owens, Arch., 323 N. Charles St.

KENSINGTON, MD.—The question of building a new high school is being discussed, according to reports.

WASHINGTON, D. C.—It is stated that an addition, to cost about $50,000, to the Government Hospital for the Insane, will be built this spring.——The question of erecting a municipal building, to cost about $2,500,000, is being discussed.——Bids are asked until March 5 for about 6,300 tons structural steel, 170 tons iron castings, from 400,000 to 1,400,000 enameled bricks and about 400,000 sq. ft. fireproof floor, ceiling and roof construction, as stated in our advertising columns. Lieut. J. S. Sewell, U. S. Engr., 735 N. Capitol St.

COLUMBUS, GA.—Bids are asked until March 1 for constructing, except heating apparatus, the extension to U. S. Building. J. K. Taylor, Supv. Arch., Washington.

VICKSBURG, MISS.—W. L. Trowbridge, Mayor, writes us that the city has before the legislature a bill authorizing it to issue $350,000 in bonds for a city hall, sewerage system, etc.

MEMPHIS, TENN.—It is stated that the Louisville & Nashville and other Rys. will erect a union depot. N. H. Smith, Pres. S. & N. Ry.

CLEVELAND, O.—D. W. Ditto and F. M. Kirk will, it is said, build a 15-story building on Euclid Ave., to cost about $1,000,000.

COLUMBUS BARRACKS, O.—Bids are asked until Feb. 3 for constructing and plumbing four barracks buildings. Capt. C. W. King, Constructing Quartermaster.

MARQUETTE, MICH.—Charlton, Gilbert & Demar have prepared plans for a telephone building for the Michigan Telephone Co. The contract will be let Feb. 12.

CHICAGO, ILL.—Plans have been filed by A. R. Clark & Co. for a 3-story brick apartment house at 4604 Vincennes Ave., to cost about $75,000; by A. D. Baldwin, for two 3-story flats at 1540 Jackson Boulevard, to cost about $60,000; by the Ogdensburg Transit Co., for a 1-story freight-house at 154 Kingsbury St., to cost about $65,000. F. J. MacDonald, 700 W. 53d St., has prepared plans for a 4-story apartment house for H. S. Haggard, at 65th St. and Lexington Ave., to cost about $100,000; and for a 4-story apartment house for J. E. Bennett, at Dearborn St., near 61st St., to cost about $30,000.

CHICAGO, ILL.—Bids are asked until Feb. 1 for masonry, carpentry and plumbing for alterations to the offices of the Election Commissioners. L. E. McGann, Comr.

URBANA, ILL.—Plans have been submitted to the County Commissioners, for plans for alterations to the court house to cost about $50,000.

PORT WASHINGTON, WIS.—Fred. Graf, 520 Matthews Bldg., Milwaukee, has prepared plans for a new court house to cost about $35,000.

CEDAR RAPIDS, IA.—The American Cereal Co. has filed plans for improvements to its plant to cost about $157,000.

ST. PAUL, MINN.—Ries & Co., 918 Thomas St., are reported to have received the contract for erecting St. Joseph's Catholic Orphan Asylum at Randolph and Hamline Aves., at $39,379. H. Kretz & Co., Archs., N. Y. Life Insurance Bldg.

SEATTLE, WASH.—The Great Northern Ry. line will erect a depot on Occidental Ave. J. J. Hill, Pres., St. Paul, Minn.

ALTURAS, CAL.—Bids are asked until Feb. 12 for furnishing cells for the County Jail. L. S. Smith, Clk. Bd. County Supr.

LOS ANGELES, CAL.—G. D. Rowan and O. H. Churchill will erect a hotel at Broadway and 6th St., to cost about $100,000.

WATER-WORKS.

ESSEX JUNCTION, VT.—Bids are asked until Feb. 20 for constructing the proposed works, to cost about $30,000. J. S. Reynolds, Chn. Com.——The contracts for the pipe, hydrants and valves have been let to M. J. Drummond & Co., 192 Broadway, New York.

NORWICH, CONN.—R. S. Bartlett, Supt., writes us that new works are proposed, but it is not decided when work will begin. P. M. Blake, Engr., Newtonville, Mass.; F. R. Wasley, Pres. Water Bd.

WATERBURY, CONN.—E. G. Kilduff, Mayor, writes us that this city will spend about $10,000 for extending the water pipe, $15,000 for sewers and $25,000 for paving. Robt. Cairns, Cy. Engr.

BROOKLYN, N. Y.—The council has passed a resolution recommending the appropriation by the board of public improvements of $125,000 for a filter plant at Baisley's Pond, Queens county.——The following bids were received Jan. 18 for laying cast-iron water mains from Governor's Island to Brooklyn; S. R. Jones, Q. M., U. S. V., all of New York: Thielmann & Smith, 147 E. 125th St., $8,401; Merritt & Chapman Derrick & Wrecking Co., 27 William St., $6,280; R. G. Packard, 130 Pearl St., $10,250; Abbott-Gamble Contracting Co., Times Bldg., $5,700; Wm. H. Masterson, 231 E. 86th St., $7,400; John Cornwell, Jr., 69 E. 127th St., $8,800; The United Co., 21 Park Row, $4,924; Jas. R. Floyd, Jr., 539 W. 20th St., $7,350; Sandford & Stillman Co., 26 Exchange Place, $4 per ft.; total, $8,400.

DANVILLE, N. Y.—An election will be held Feb. 13 to vote on the question of appropriating $9,000 for a better water supply.

GENEVA, N. Y.—Bids are asked until Feb. 19 for building a reservoir of 10,000,000 gallons capacity, and a gate house, with wells, etc., as stated in our advertising columns. E. Seybolt, Supt.

GLOVERSVILLE, N. Y.—Reports state that Clinton Beckwith, Herkimer, N. Y., has been awarded the contract at $11,698 for constructing 14,000 ft. of iron conduit, and a reservoir at Sacandaga Park for the Fonda, Johnstown & Gloversville R. R. Co. J. L. Hees, Pres.

JAMESTOWN, N. Y.—The Jamestown Water Supply Co. is reported to have let the contract for a 5,000,000-gallon pumping engine to be placed at Levant to the Edward P. Allis Co., Milwaukee, Wis.

FRENCHTOWN, N. J.—A company is reported as securing a subscription for furnishing a water supply. Artesian wells will be drilled and a stand-pipe erected.

MONTCLAIR, N. J.—It is stated that the West Jersey Water Co. will submit a proposition to furnish this city with 5,000,000 gallons of water a day.

VINELAND, N. J.—An election will be held Feb. 27 to vote on the question of issuing $140,000 in bonds for the purchase of the works owned by Keighley & Son, and for a sewerage system.

WESTFIELD, N. J.—The Consumers' Water Supply & Electric Lighting Co., it is stated, has succeeded in securing sufficient subscribers to enable it to put in the proposed works.

TYRONE, PA.—The county court has enjoined this city from erecting new works, to cost $75,000, but must purchase the plant of the Tyrone Gas & Water Co.

LEWES, DEL.—J. T. Thompson, Mayor, writes us that no appropriation for works has been made; estimated cost, $15,000. No action has yet been taken by the board regarding an electric plant.

FROSTBURG, MD.—It is proposed to drive another well for a water supply, and to build a new reservoir.

HYATTSVILLE, MD.—The legislature will be asked to authorize this place to issue $30,000 in bonds for works and to vote on the question. C. E. Postley, Chn. Com.

ST. MICHAELS, MD.—This place has voted to issue $15,000 in bonds for works and an electric plant. The town commissioners also propose to build a sewerage system.

BUCHANAN, VA.—O. E. Obershain, Pres., writes us that nothing is yet ready to report regarding the proposed gravity works; population, 1,000.

RICHMOND, VA.—C. E. Bolling, Supt., writes us that no plans have yet been adopted nor appropriations made for filtering the water.

ELKINS, W. VA.—We are informed that the contract for works, recently awarded to F. T. Kitson, Reading, Pa., has been rescinded by the council, and awarded to Rosser & Castoe, Bellaire, O., at $28,800. On Jan. 25 the water bonds were sold to the latter firm at par and a premium of $675 total issue of $25,000. The plans for works prepared by D. J. Adelsberger, 722 Pennsylvania Ave., Baltimore, Md., have been revised by substituting a reservoir instead of wooden tanks, and gasoline engine and power pump instead of steam plant.

JACKSON, GA.—C. O. Beauchamp, Mayor, writes us that it is most likely that works will be built in the spring. Bonds for $2,000 for the equipment have been voted.

SHEFFIELD, ALA.—Al. Goldman, Secy., writes us that the council has appointed a committee to investigate the cost of building works; also to obtain plans. The committee will soon make a report.

CRYSTAL SPRINGS, MISS.—C. A. Rhymes, Chn. Com., writes us that the city will put in works and an electric plant. There will be wanted two 60-in. × 16-ft. boilers, one automatic slow speed engine of 100 HP., a dynamo of 1,000 light capacity, a 20-arc light dynamo, two pumps, 5 miles of pipe, an air lift. These contracts will be let in February.——Bids are asked until Feb. 6 for purchasing $25,000 of 20-year 5% bonds. T. V. Hall, Starkville, Miss., and Walter G. Kirkpatrick, Jackson, Miss., Engrs.; C. A Redding, Cy. Clk.

YAZOO, MISS.—Information for works and an electric plant is being secured by Jos. S. Williams, Chn. Com.

BATAVIA, O.—A. T. Johnson, Secy. Water-Works Trustees, writes us that an election will be held Feb. 3 to vote on the question of issuing bonds for works and electric plant. If the election carries arrangements for letting the contracts will be made at once, so that work may be begun by April 1. Chas. Belt, Pres.

CLEVELAND, O.—We are informed that the following bids were received Jan. 29 for furnishing pumping engines, as advertised in Engineering News: M. W. Kingsley, Supt. Water-Works; Walter P. Rice, Dir. Pub. Wks.; furnishing two or four 25 million gallon vertical triple expansion crank and fly-wheel pumping engines, for the Kirkland St. station: (1) being in case two engines are to be furnished, complete and ready for service; (2) in case four engines are to be furnished, Holly Mfg. Co., Lockport, N. Y., (1) $156,000, each; (2) $154,900, each; The Geo. F. Blake Mfg. Co., East Cambridge, Mass., (1) $163,900; (2) $162,900; The Edward P. Allis Co., Milwaukee, Wis. In case two engines are to be furnished, each engine complete and ready for service, as per plan and specification marked A¹, $330,000; or as per plan and specification marked A², $350,000; or B, 388,000, each of above bid for two engines; in case four engines are to be furnished, each engine complete and ready for service, as per plan and specification marked A¹, $645,000; or as per plan and specification marked A², $680,000; or B, $756,000, each of above bid for four engines. The following are the bids for the 20 million gallon for the Division St. station: E. P. Allis Co., engine complete and ready for service, plan and specification marked "C," $142,000; marked "D," $147,000; The Holly Mfg. Co., complete and ready for service, $156,600. The bid of the G. F. Blake Mfg. Co. was informal.

ELYRIA, O.—An election will be held April 2 to vote on the question of issuing $300,000 in bonds for new works.

LIMA, O.—The question of improving the water supply at a cost of $175,000 is reported as being considered

SPRINGFIELD, O.—It is proposed to issue $50,000 in bonds for improving the works and the sewerage system. E. C. Gwyn, Vice-Pres. Bd. Pub. Wks.

EVANSVILLE, IND.—B. F. Von Behren, of the water-works board, has proposed that the city offer a prize of $1,000 to study the water filtration question, prepare plans, etc., for improving the water supply of this city. Ferd. Grote, Pres. Bd.

ROCKPORT, IND.—A. H. Kennedy, Secy. Rockport Water-Works Co., writes us that there will be wanted a mile of 6, 8 and 10-in. pipe, 2,000,000-gallon duplex pump, four 10-in. wells and steamers, to be operated by air compressor, new 150-HP. boiler, etc. Work will be begun in the spring. The pumping station and pipe laying will be done by the company.

WASHINGTON, IND.—The Washington Light & Power Co. has been incorporated, with a capital stock of $21,000, by R. A. Brown, W. F. Burke, and H. M. Geiger.

BLOOMINGTON, ILL.—Bids will be wanted about March 1 for furnishing 2,600 ft. of 6-in. water pipe, with hydrants, valves, etc., and about 12,000 ft. of 27 to 8-in. pipe sewers. Address J. G. Melluish.

CAPRON, ILL.—The question of works, it is stated, will soon be voted upon.

CHICAGO, ILL.—Bids are asked until Feb. 7 for laying water mains in 37 streets. L. E. McGann, Pres. Bd.

MONMOUTH, ILL.—W. A. Sawyer, Mayor, writes us that the ordinance authorizing the letting of contracts for extending the works will probably pass on Feb. 5. The specifications call for a deep well, pumping shaft, tower, new pump, remodeling pump house, etc.; estimated cost, $27,000. D. W. Mead, Engr., First National Bank, Chicago.

MOUND CITY, ILL.—The question of works is reported as being considered. Mr. Dougherty, of the electric light plant, may be addressed.

OAK LAWN, ILL.—The contract for an artesian well to supply the town with water has been let to L. Wilson, 225 Dearborn St., Chicago. Work has been commenced on the well to furnish 100 gallons per minute.

OSKALOOSA, IA.—W. N. Wray, Mayor, writes us that the franchise of the Oskaloosa Water Co. expired Nov. 10, 1899. A new ordinance has passed the council, and will be submitted to the voters on Feb. 27. The ordinance requires that an additional 12-in. pipe from Skunk River to the city, 4½ miles; 24 new hydrants and several blocks of additional mains in the city.

OSAKIS, MINN.—The council is considering a proposition to put in works and an electric plant. An election to vote on the question will likely be held in the spring.

SLAYTON, MINN.—Thos. Lowe, Mayor, writes us that the contract for sinking a well for a water supply has been let. The contracts for a water tower and mains will be let in the early spring. No engineer yet employed.

ALCESTER, S. DAK.—The question of works and an electric plant is being considered, according to reports.

HUDSON, S. DAK.—T. R. Rosier, of Fairview, S. Dak., it is reported, has the contract for constructing works.

LIVINGSTON, MONT.—J. A. Savage, Cy. Clk., writes us that this place voted on Jan. 25 against purchasing the works of the Livingston Water & Electric Co.

APPLETON CITY, MO.—H. R. Howard, Secy. and Treas. Appleton City Water & Power Co., writes us that the company is ready to put in a well. Bids for drilling the well will soon be wanted. Capital stock, $2,500.

ST. LOUIS, MO.—We are informed that the distribution system will be extended at a cost for material and laying of $533,000. About 30 miles of pipe will be wanted, the contract to be let about April 1. There will also be a letting about May 15 for three miles of 36-in. pump main, to cost about $250,000; filter propositions, plans, etc., will be considered Feb. 1. R. E. McMath, Pres. Bd. Pub. Wks.; M. L. Holman, Water Comr.; Ben. C. Adkins, Engr.-in-Charge Distribution System and Des. Engr.

STUTTGART, ARK.—Chas Williamson, Mgr. Stuttgart Water & Electric Light Co., writes us that construction of the works will be begun in a few weeks. An electric plant has recently been completed.

WACO, TEX.—Bids are asked until Feb. 15 for furnishing a 25-HP. gasoline engine and one power head pumping engine. J. P. Sample, Secy. Bell Water Co.

WILLS POINT, TEX.—J. R. Fenney, Mayor, writes us that no estimate has as yet been made of what will be required for the proposed works. No engineer has yet been engaged. It will probably be June 1 before bonds are issued or contracts let. The water supply will be secured from artificial lake. Population, 3,000.

ENID, OKLA. TER.—Jos. Melbergen, Mayor, writes us that the city will put in works, to cost about $15,000, and later will add to same. The bonds were voted for on Jan. 23, and the city will soon be ready to make a contract for plans, etc. Population, 5,000.

PAWNEE, OKLA TER.—Wm. Bruington, Mayor, writes us that it is expected to soon submit the question of issuing bonds for works to a vote of the people, either in February or March. No estimates have yet been made.

STILLWATER, OKLA. TER.—W. R. McGeorge, Mayor, writes us that the ordinance calling an election March 6 for works has passed its first reading. The plans and specifications for the works, which will cost $30,000, were prepared by Geo. Cadogan Morgan, 143 La Salle St., Chicago.

PETALUMA, CAL.—The Petaluma Power & Water Co. has been incorporated with a capital stock of $300,000, by A. B. Hill, F. P. Doyle and C. H. Egan.

PLEASANTON, CAL.—The ordinance providing for an issuance of $20,000 in bonds for works has been passed. J. H. Neal, Town Clk.

PHOENIX, ARIZ.—E. Ganz, Mayor, writes us that an election will be held Feb. 23 to vote on the question of issuing $270,000 in bonds for works, and $125,000 for a sewerage system. No plans have yet been adopted.

BRANTFORD, ONT.—F. W. Frank, Secy. Water Bd., writes us that a new pump has been purchased from the Holly Mfg. Co., Lockport, N. Y., for $29,957.

PORT HOPE, ONT.—J. W. Quinlan, Mayor, writes us that it is proposed to extend the pumping station by the purchase of another pumping engine and boiler, increase the filter basins, substitute a steel stand-pipe for the present wooden tower, and also to extend the mains. Robt. Deyell, Chn. Bd. Comrs.

IRRIGATION.

ST. MARTINVILLE, LA.—The St. Martinville Irrigating Co. will receive bids for machinery for a system for 1,500 acres of rice. L. C. Duchamp, Pres.

TAMPA, FLA.—Colonel Camp has let a contract to the Tampa Supply Co. for an irrigation plant, to cost about $60,000.

MONTROSE, COLO.—W. H. Johnson, Secy., writes us that the Cimaeron & Uncompahgre Valley Canal & Reservoir Co. has just organized and will construct a mountain ditch for water purposes; estimated length, 24 miles; cost, $50,000; to carry 100 ft., to be built on contract system by local farmers for use of all ditches of valley of Uncompahgre who take part in its construction. Work to commence in the spring.

AZUSA, CAL.—The trustees have passed an ordinance calling for an election on Feb. 27 for the purpose of voting on an issue of $21,500 in bonds for the purchase of a pipe line, owned by James Slanson and Mrs. McNeil.

HEMET, CAL.—K. S. Carlton, Secy., Fruitvale Water Co., writes us that contract will be let after March 10 for 10-in. wells, pumps, and engines with a capacity of 250 miners' inches lift about 35 ft., and about 3 miles of pipe line and several miles of cement ditch.

NEW COMPANIES—Sheep Creek Irrigation Co., Salt Lake City, Utah; $50,000; C. Chambers, Park City; E. Daggett, Salt Lake City.

Chipeta Ditch & Irrigation Co., Montrose, Cal.; E. J. Mathews, E. S. Osborn.

Goshen Hole Irrigation Co., Cheyenne, Wyo.; $1,000,000; T. Sturgis, H. S. Bush.

SEWERAGE.

SWAMPSCOTT, MASS.—A hearing was called by the board of harbor and land commissioners, Boston, on Jan. 31, to consider the application of Swampscott for permission to build a sewer outlet in Swampscott Bay.

TAUNTON, MASS.—A. M. Alger, Mayor, writes us that the petition for authority to issue $400,000 in bonds for a complete system has been reported upon favorably by the legislative committee, and is now pending. In his inaugural address Mayor Alger stated that a new pumping engine for the water-works is required. T. F. Cavanagh is a member of the committee.

TEMPLETON, MASS.—It is proposed to build a system and water-works for the state school for feeble-minded at this place.

HARTFORD, CONN.—It is stated that the question of building the southwestern sewer extension will be submitted to a vote of the people in the spring.——A. B. Allenson, it is stated, is preparing plans for a system for Hartford Centre, to include a filtration system.

BROOKLYN, N. Y.—Bids will soon be asked by Jas. Kane, Sewer Comr., Manhattan, for the first section of the Fort Hamilton system. The system will be over three miles long and will cost $400,000. The first section will be 3,700 ft. long, and 13½ ft. in diameter. The sewer will be built through mostly rock.

EAST HAMPTON (L. I.), N. Y.—Wm. H. Barnes, formerly City Engineer of Topeka, Kan., has applied for a franchise to build and operate a system. A company will be organized, and if the franchise is granted, plans will be completed by July 1, and work begun before January, 1901. Jos. S. Osborne, Town Clk.; T. D. Dimon, Chn.

VINELAND, N. J.—An election will be held Feb. 27 to vote on the question of issuing $140,000 in bonds for a system and for purchasing the water-works owned by Keighley & Sons.

LEBANON, PA.—Geo. B. Schork writes us that the questions of sewers and paving are being considered, and information on the subject secured. It is likely that the new councils will do something definite.

M'KEESPORT, PA.—A. B. O'Neil writes us that two or three main sewers are contemplated, but on account of the city election taking place on Feb. 20 it is likely that the matter will be delayed. One sewer will be 3,000 ft. long, 7 ft. in diameter, average cut 10 or 20 ft., and will cost about $30,000.

MEDIA, PA.—H. C. Smith writes us that the question of sewerage is again being considered, having been voted down about two years ago by the citizens.

PHILADELPHIA, PA.—The councils survey committee has appropriated $300,000 for sewers in nine streets.

WAYNESBURG, PA.—Reports state that bids will be wanted about Feb. 12 by the borough clerk for extending the sewers; estimated cost, $50,000.

WILMINGTON, N. C.—C. W. Worth, Chn. Com., writes us that nothing definite has yet been done regarding a system, surveys and plans for which were prepared by Rudolph Hering, 100 William St., New York.——A. M. Waddell, Mayor, writes us that the work will not be done

by the city, as no bonds are authorized to be issued, but by contract guaranteed by the city.——The report in our last issue under Wilmington, Del., regarding Mayor Waddell's appointments was a typographical error.

ATLANTA, GA.—Bids are asked until Feb. 5 for about five miles of sewers, for furnishing cement and sewer castings, and for curbing and brick sidewalks. R. M. Clayton, Cy. Engr.

LAKE CHARLES, LA.—G. T. Rock writes us that it is hoped to receive the plans for a system, water-works and electric plant in 50 or 80 days.

VICKSBURG, MISS.—W. L. Trowbridge, Mayor, writes us that the city has a bill before the legislature asking for authority to issue $350,000 in bonds for sewerage, to purchase the water-works and to build a city hall.

MEMPHIS, TENN.—J. J. Williams, Mayor, writes us that the city proposes to build 40 or 50 miles of sewers during the year, the work to be done by the city.——An effort will be made to have the railway tracks elevated on river front. There will also be extensive park work. A. T. Bell, Cy. Engr.

NASHVILLE, TENN.—J. M. Head, Mayor, writes us that when the legislature meets next January authority will be asked of it to allow this city to issue $500,000 in bonds for a system.

BELLEFONTAINE, O.—J. R. Cassidy, Mayor, writes us that on Feb. 6 an election will be held to vote on the question of building a system to have about 20 miles of sewers. Should it carry, no paving will be done this year. Jas. C. Wonders, Engr.

CINCINNATI, O.—J. A. Stewart, Village Engr., for Hyde Park, O., (?) with offices at 517 Johnston Bldg., Cincinnati, writes us that the question of issuing $200,000 in bonds for 10 miles of 12 to 6-in. pipe sewers will be voted upon at a special election.

EAST LIVERPOOL, O.—J. A. George, Cy. Engr., writes us that nothing further has been done regarding the sewers since the passing of the ordinance to construct five miles of 6, 8 and 12-in. pipe sewers on Jan. 9.

LAKEWOOD, O.—An election will be held Feb. 15 to vote on the question of issuing $150,000 in bonds for a system. The sewage filtration plant will be erected near the Rocky River. Prof. H. W. Elliott, Chn. Com.

WELLSVILLE, O.—The city clerk writes us that bids for 4,110 ft. of 60, 72 and 78-in. brick sewer, with an average cut of 3½ ft., will be received in about 60 days, from Jan. 27; estimated cost, about $30,000. Riggs & Sherman, Engrs. The Nasby, Toledo, O.

WINTON PLACE, O.—It is stated that an election will be held Feb. 6 to vote on the question of issuing $55,000 in bonds for a sewer.

BLOOMINGTON, ILL.—J. G. Melluish writes us that it is proposed to build 12,000 ft. of 27 to 8-in. pipe sewer, average cut, 9.8 ft., 2,600 ft. of 6-in. cast iron water-pipe, with hydrants, valves, etc., and five miles of macadam road, average width 14 ft. Correspondence is solicited, and samples are wanted regarding road materials and surfacing. Bids will be wanted about March 1.

CHAMPAIGN, ILL.—Bids are asked until Feb. 14 for furnishing labor and material for the following sewer work: 70-ft. brick sewer, 66 × 84-in.; 1,770 ft., 60 × 60-in.; 810 ft. 54 × 54-in.; 6 manholes and one outfall abutment, as stated in our advertising columns. C. A. Dryer, Cy. Clk.

WICHITA, KAN.—Bids are asked until Feb. 26 for constructing a sewer in district No. 2, to cost $9,300. The bids for the work recently received were rejected. Address City Engineer Jackson and Alderman Davidson.

ST. JOSEPH, MO.—Ordinances are before the council providing for sewer and street work to cost about $50,000. Address City Engineer Rackliffe.

EL PASO, TEX.—G. C. Wimberly, Cy. Engr., writes us that work on a 24-in. pipe outfall sewer to be 8,125 ft. long, and to cost about $20,000, is in progress. Bonds for this purpose were voted for on Jan. 9.

EL RENO, TEX.—A report states that H. H. Hendershot, Wichita, Kan., will complete the plans for the proposed system in about 10 days, after which bids will be wanted for the construction.

WALLA WALLA, WASH.—It is stated that as Engineer Miller has completed surveys and plans for the system, the council will at once call for bids for supplying the material. About 23¼ miles of 24 to 6-in. pipe will be required to complete the system, and will cost about $30,000. The 18, 20 and 24-in. pipe is to be double in thickness. The plan calls for 180 manholes and 52 flush tanks.

LOS ANGELES, CAL.—It is reported that F. H. Olmsted, Cy. Engr., is preparing plans for a system.

SACRAMENTO, CAL.—Bids are asked until Feb. 12 for constructing a main sewer in 20th St. Work is not to be begun until May. M. J. Desmond, Cy. Clk.

ARNPRIOR, ONT.—W. H. Howe, Mayor, writes us that it is likely that a by-law will soon be submitted to raise $75,000 to put in a system and water-works.

GARBAGE DISPOSAL—STREET CLEANING

ITHACA, N. Y.—Prof. Nathanial Schmidt writes us that the present garbage disposal contract expires Feb. 1. It will not be renewed. The city will then assume charge of collecting and disposing of the garbage. Ashes will be separated from kitchen refuse. The committee will investigate the various cremation plants, and probably recommend the purchase of a crematory.

MOUNT VERNON, N. Y.—We are informed that the following bids were received Jan. 23 for removing ashes and garbage for two years from Feb. 1; all local bidders: Henry Fink, $6,000 (accepted); Dooling & Kenlon, $5,975; Fred'k Johnson, $5,750; John Koepper, $6,500; Frank Nordone, $6,250, and John I. Reynolds, Jr., $5,800.

NEW YORK, N. Y.—Bids are asked until Feb. 5 for picking over and sorting the refuse and for the privilege of loading and trimming deck scows and dumpers of the Street Cleaning Department. The contract for this work with Herbert S. Tate will soon expire. Jas. McCartney, Comr., 13 Park Row.——The bids recently received by the department for collecting garbage and ashes in Queens have all been rejected. This was done on the advice of Corporation Counsel Whalen because the bids were all for an entire year's work, and part of the year has expired. Other bids will be asked for within a short time.

POUGHKEEPSIE, N. Y.—Bids are asked until Feb. 5 for removing the garbage from the city for the year. C. S. Howland, Cy. Chamberlain.

BALTIMORE, MD.—Mayor Hayes is investigating the question of uniforming the street sweepers and otherwise improving the present methods of the street cleaning.

MANSFIELD, O.—The question of a crematory for destroying the garbage, etc., is being considered.

JOLIET, ILL.—J. B. Mount, Mayor; H. A. Stevens, Cy. Engr.; J. R. Casey, Health Comr., and Alderman A. M. Scheidt, are securing information for a crematory.

MINNEAPOLIS, MINN.—Local papers state that Dr. Norton, the Health Officer; Alderman Lloyd and City Engineer Sublette, have been instructed to make a further study of the question of garbage disposal, and to draw up specifications under which bids may be asked for a crematory..

OTTAWA, ONT.—City Engineer Galt has recommended that the street sweepers be uniformed and other improvements be made in the street cleaning methods. H. N. Bate, Chn. Improvement Comn.

STREETS AND ROADS.

BOSTON, MASS.—Bids are asked until Feb. 1 for macadamizing Aberdeen St. B. W. Wells, Supt. Streets.——It is proposed to widen Cross, Commercial and India Sts., to cost about $2,000,000.

MELROSE, MASS.—Alderman Moore has offered a resolution authorizing the spending of $100,000 in permanent improvements to streets.

WATERBURY, CONN.—E. G. Kilduff, Mayor, writes us that the city will spend about $25,000 on paving and $15,000 for sewers for the coming season.

JERSEY CITY, N. J.—Bids are asked until Feb. 6 for improving Claremont St. G. W. Bouton, Clk. St. Comrs.

NEWARK, N. J.—The council will probably appropriate $100,000 for paving purposes.

PASSAIC, N. J.—Bids are asked by the City Clerk until Feb. 2 for improving Wickham St. J. A. Parker, Street Comr.

RIVERTON, N. J.—It is reported that the freeholders have asked for bids for constructing about 25,475 ft. of stone roads.

ASHEVILLE, N. C.—W. A. Blair, Mayor, writes us that the Robbins Paving Co., Chattanooga, Tenn., has the contract for all the paving to be done at present.

COLUMBIA, S. C.—A resolution has been introduced authorizing the pavement of Gewais St.

ATLANTA, GA.—Bids are asked until Feb. 5 for street improvements and sewers. D. G. Wylie, Comr. Pub. Wks.——The council has appropriated $10,000 for paving Peters St., $5,000 for paving Decatur St., and $5,000 for improving Edgewood Ave.

ANNISTON, ALA.—The council has ordered sidewalks laid on several streets. O. Z. Henderson, Mayor; G. T. Anderson, Clk.

BIRMINGHAM, ALA.—It is stated that J. F. B. Jackson, County Supt. Pub. Wks., will spend about $50,000 on macadam this year.

BELLEFONTAINE, O.—J. R. Cassidy, Mayor, writes us that the question of putting in a complete sewerage system, about 20 miles of mains, will be voted on Feb. 6. If passed, no paving will be done this year.

CINCINNATI, O.—Bids are asked until Feb. 26 for improving Hoge St. G. H. Spellmire, Clk. Bd. Cy. Affairs.

CLEVELAND, O.—The park board has accepted the offer of J. H. Wade to pay half the expense of completing the upper Wade Boulevard, to cost $35,000.

COLUMBUS, O.—The question of extending and improving Third St. is being discussed.

GREENVILLE, O.—The City Engineer has been directed to prepare plans for improving Wayne and Harrison Aves. and Walker St.

IRONTON, O.—The council has rejected all bids for paving Vine St.

MIDDLETOWN, O.—The council has directed County Surveyor Dillon to prepare plans, etc., for paving Third St. to the Big Four railroad tracks.

NORWALK, O.—A. E. Rowley, Mayor, writes us that the council has passed a resolution declaring the necessity of paving Main St. from curb to curb, to cost about $20,000. A movement is on foot to pave only a portion of the street, which would reduce the cost one-half.

URBANA, O.—The city council has passed a resolution for laying sidewalks on Kenton and Water Sts. T. A. Edmonson, Pres. Council; W. E. Berry, Cy. Clk.

WAPAKONETA, O.—Saml. Craig, Cy. Engr., writes us that plans and specifications for about 6,500 sq. yds. of paving on Anglaize St., with necessary sewers, catch-basins, curbs, etc.

WABASH, IND.—Bids are asked until Feb. 26 for about 22,000 sq. yds. of sheet asphalt and block asphalt paving and about 14,000 ft. of combined cement curb and gutter; R. P. Woods, Cy. Engr.

BAY CITY, MICH.—Bids are asked until Feb. 5 for improving First St. O. A. Watrons, Chn. Bd. Pub. Wks.

BLOOMINGTON, ILL.—J. G. Melluish writes us that bids will be asked about March 1 for about 5,700 sq.yds. of brick paving, to cost about $9,500, and five miles of macadam roadway, about 14 ft. wide, to cost about $20,000. He wants correspondence and samples for surfacing materials.

MOLINE, ILL.—The question of paving Sixth St. is again being discussed.

SPRINGFIELD, ILL.—The people have voted to adopt a system of boulevards and parks.

LA CROSSE, WIS.—Frank Powell, Cy. Engr., writes us that bids will probably be received about April 1 to 15 for about 70,000 sq. yds. of brick paving, to cost about $125,000.

ST. JOSEPH, MO.—The council has been petitioned to pave Missouri Ave.

SEATTLE, WASH.—C. B. Bagley, Secy. Bd. Pub. Wks., writes us that the contract for improvement of Queen Anne Driveway was let Jan. 20 to C. I. Erickson at $8,190.——It is stated that a resolution will be introduced providing for the improvement of Madison St., to cost $50,000, at the next council meeting.

SPOKANE, WASH.—The council is said to favor the paving of the whole downtown district with brick.

OAKLAND, CAL.—M. K. Miller, Supt. Streets, writes us that the question of issuing bonds for paving main thoroughfares, sewers, a new city hall, etc., to cost in all about $1,750,000, will soon be voted on.

RED BLUFF, CAL.—Bids are asked until Feb. 7 for constructing the Hatch Road in road district 1 and five wooden bridges. W. A. Fish, Clk. Bd. County Supv.

HAMILTON, ONT.—E. B. Wingate writes us that a by-law was carried, appropriating $150,000 for macadam paving and stone and cement curbs. The council has ordered work on the Birch Ave. sewer, from Barton St. to the disposal works, 42-in. and 2,300 ft. long, to cost about $10,800, including crossing an inlet by iron pipe 4 ft. in diameter on piles, work to be done by corporation labor.

MANUFACTURING PLANTS.

NEWPORT, ME.—Reports state that purchases of additional machinery are now being made for the Newport Woolen Mills.

GREENPOINT (L.I.), N. Y.—It is reported that Dogeley & Lackman will remove their plant from West Broadway, New York, to Greenpoint. The plant will employ about 150 hands and the building will cost about $15,000.

NEW YORK, N. Y.—The chair factory of Heywood Bros. & Wakefield Co., at 297 Cherry St., was destroyed by fire on Jan. 20; reported loss, $350,000.

PHILADELPHIA, PA.—It is reported that plans are being considered by the Susquehanna Co. for erecting a pipe mill to cost about $500,000.

PITTSBURG, PA.—Local papers state that the Union Switch & Signal Co., on Jan. 22, let the contracts for constructing its new plant at Swissvale to James Stewart & Co., Commercial Bldg., St. Louis, Mo., and the Shiffler Bridge Co., Pittsburg, at about $350,000. The new plant will be a two-story brick, stone and steel building, 364 ft. long and 300 ft. wide. The machinery will be transferred from the old plant. The James Stewart & Co. share of the contract is about $275,000, while the Shiffler Bridge Co. share is $90,000.

PITTSBURG, PA.—The Sharon Steel Co. is reported to have awarded the contract to the Morgan Construction Co., Worcester, Mass., for erecting two rod mills, a billet mill and heating furnaces, and for the machinery. The plant will have a daily capacity of 400 tons of wire.

SHENANDOAH, PA.—The Howe Brewing Co. is reported to have purchased a site on which it will erect a brewery.

TAYLORSVILLE, N. C.—E. L. Hendrick informs us that the company has not been formed to build the proposed mill, but he will want 2,000 spindles and other machinery necessary for a mill of that size. Carding and spinning machinery is wanted as stock; good second-hand machinery may be used.

CLAYTON, N. C.—A knitting mill company has been organized, with Ashley Horne as president, to build a $75,000 mill.

LONG ISLAND, N. C.—The Long Island Cotton Mills are desirous of information on the prices on fire pumps operated by friction gear, to be placed in a small picker house now being built.

FAIRMONT, S. C.—L. G. Harris, Treas., informs us that bids are wanted at once for the equipment of the Fairmont Mills, to manufacture 36-in. sheetings, which will include eight cards, one railway head, one stubber, one intermediate, two fine speeders, 2,000 spindles and 48 looms, to cost about $20,000.

EATONTON, GA.—The Eatonton Electric Co. has had its charter amended to build cotton factories, and has selected J. W. Preston, Pres., and E. B. Browny, Vice-Pres., as officers of the plant, which will be built in this town, to cost about $75,000.

JOCKEY, GA.—T. W. Dowda, Jockey, writes us that he desires information on the cost of a cotton factory to spin from 200 to 500 yds. in 10 hours, to be operated by water-power. Mr. Dowda desires full particulars regarding the necessary machinery and the cost.

ROME, GA.—J. A. Wynn, Rome, informs us that he wants a 100-HP. engine and a 100-HP. boiler for a mill that has been completed. The building will be equipped with steam power and electricity for lighting purposes.

BIRMINGHAM, ALA.—The Birmingham Pipe & Casting Co. recently incorporated with $55,000 capital stock. The company has purchased the Baxter Stove Works and will convert the property into a soil works. E. W. Abrams, Pres., Birmingham; F. E. Glenn, Secy., St. Charles, Ill.

HATTIESBURG, MISS.—W. H. Hardy informs us that the charter of the Hattiesburg Cotton Mills Co. is now before the governor for approval, and when approved a company will be organized to build and operate a cotton plant.

NEW ORLEANS, LA.—John L. Schroeder, 10 St. Charles St., New Orleans, writes us that the contracts for constructing the proposed mill wil be let on March 1; estimated cost, $5,000. Bids for the equipment, which includes a 25-HP. and a 10-HP. dynamo, will also be received on that day; estimated cost, $7,500. All machinery is still unpurchased.

BELLAIRE, O.—The electric plant and laboratories of the Bellaire Steel Works, owned by the National Steel Co., were destroyed by fire Jan. 30; reported loss, $100,000.

ST. BERNARD, O.—Reports state that the Jarecki Chemical Co., Sandusky, has purchased a site for a new $150,000 fertilizer plant, to employ 400 hands. Work will commence soon. John S. O'Neal and T. C. Meadows, Columbus, are interested.

MUNCIE, IND.—Fire destroyed the electric street car plant on Jan. 22, with 14 motor cars and two trailers, involving a loss of about $75,000. The engines and dynamos were ruined. Plans are now being made for a new plant.

BENTON HARBOR, MICH.—The board of trade has accepted the proposition of J. V. Farwell & Co. to locate their overall, shirt and coat factory in this city. The plant will employ about 500 hands.

MINNEAPOLIS, MINN.—Chas. R. Aldrich, Arch., 708 Lumber Exchange, Minneapolis, informs us that a contract for a cold storage building, 44 × 100 ft., to cost about $7,000, will be let, and that equipment for mechanical refrigerating plant will be needed for the proposed cold storage plant to be built by A. G. Whitney and others of St. Paul, Minn.

SAN JOSE, CAL.— It is reported that the works of the Electric Improvement Co. were destroyed by fire on Jan. 27; reported loss, about $100,000.

GAS PLANTS.

NEW YORK, N. Y.—It is stated that the ultimate project of the combination of the lighting companies in this city will be the erection of a large coke and gas plant.

ERIE, PA.—H. W. Harris, E. E. Wright, and others, have applied for a charter for the Walnut Creek Gas Co., to operate in Fairview township and Erie.

CANFIELD, O.—Lynn & Dickson will receive proposals for an acetylene gas plant.

PERU, IND.—The pumping station of the Logansport & Wabash Valley Gas Co. at Converse was wrecked Jan. 19; loss, about $5,000.

RACINE, WIS.—Reports state that the Racine Gas Light Co. will erect a plant, to cost about $1,000,000, near the docks of the Goodrich Transportation Co.

NEW COMPANIES.—New York Power Gas Co., Washington, D. C.; $3,000,000; R. H. Goldborough, J. A. Guese.

MISCELLANEOUS CONTRACTS.

CANALS.—Columbus, O.—The legislature will be asked to appropriate $132,000 for canal work for 1900.

RECREATION PIER.—New York, N. Y.—It is stated that a recreation pier will be built at the foot of East 86th St.

BARRELS.—Syracuse, N. Y.—The Solvay Process Co. want 2,000 second-hand cement or glucose barrels by March 1.

IMPROVEMENT BONDS.—Redondo, Cal.—It is stated that the question of issuing $40,000 in improvement bonds will soon be voted on.

PILE REVETMENT.—New Orleans, La.—Bids are asked until Feb. 6 for constructing a pile revetment along the west bank of the canal.

CANAL.—Port Huron, Mich.—The question of issuing $75,000 in bonds for a canal from Lake Huron to Black River, will soon be voted on.

DREDGING.—Providence, R. I.—Bids are asked until Feb. 2 for dredging in Providence River and harbor for 1900. J. D. Grinnell, Chn. Com.

DREDGING.—Baltimore, Md.—Bids are asked until Feb. 26, for dredging Curtis Bay, Md., as stated in our advertising columns. Lieut. C. W. Kautz, U. S. Engr., 812 St. Paul St.

PILES.—New York, N. Y.—Bids are asked until Feb. 2 by the department of docks, Pier A, N. R., for furnishing about 3,000 piles. J. S. Cram, Comr.

STOCK YARDS.—Kansas City, Mo.—The Stockyards Co. has purchased 17 acres of land for new pens, and will expend about $1,000,000 in improvements.

QUARRYING.—Kingston, N. Y.—John Kiernan, 37 Meadow St., Rondout, N. Y. wants to let a contract for working a quarry about three miles from Kingston.

CANAL.—Buffalo, N. Y.—City Engineer Bardol is reported to be making surveys for a canal from Buffalo River to the lake in South Buffalo, to cost about $300,000.

DRY-DOCK.—Bay Ridge, N. Y.—The Morse Iron Works & Dry-Dock Co. will build a dry-dock 800 ft. long, from First Ave., and a two-story machine shop. E. P. Morse, Director.

LOCK AND DAM.—Red River, Man.—Bids are asked until Feb. 15 for constructing a lock and dam at St. Andrew's Rapids, Red River. The dam will be 800 ft. long, and the locks 215 ft. long. J. R. Roy, Act. Secy. Dept. Pub. Wks., Ottawa.

YACHT HARBOR.—Highland Park, Ill.—F. W. Cushing writes us that there is no truth in the report of a proposed yacht harbor. The scheme has been suggested, but is far from taking definite shape.

FIRE ENGINES.—Brooklyn, N. Y.—Bids are asked until Feb. 5 by the Fire Department, 157 E. 67th St., for two 3d size La France and two 3d size Metropolitan Steam fire engines. J. J. Scannell, Comr.

PARK.—Newport, R. I.—W. H. Lawton, Engr., Park Com., writes us that his plans for completing the Esplanade have been accepted. The board will be asked to appropriate $30,000 for the work Feb. 6.

PIER EXTENSION.—Manistee, Mich.—Bids are asked until Feb. 28 for extension and repair of piers at Manistee, as stated in our advertising columns. Capt. Chester Harding, U. S. Engr., 57 Park St., Grand Rapids.

REFRIGERATING PLANTS.—St. Louis, Mo.—Bids are asked until Feb. 28 for building and installing six refrigerating plants, as stated in our advertising columns. Capt. M. M. Patrick, U. S. Engr., Secy. Mississippi River Com.

NAVAL SUPPLIES.—Vallejo, Cal.—Bids are asked by the bureau of supplies and accounts, Washington, D. C., until Feb. 13 for furnishing a quantity of nuts, bolts, etc., at the Mare Island Navy Yard. A. S. Kenny, Paymaster-General, U. S. N.

RAPID TRANSIT TUNNEL.—New York, N. Y.—John B. McDonald, 100 Broadway, Manhattan, and Jerome Park Reservoir, Bronx Borough, who has the contract for the Rapid Transit Tunnel, writes us that no arrangements have yet been made either for supplies for the road or for sub-contracts for the construction work.

FIRE APPARATUS.—New York, N. Y.—Bids are asked until Feb. 5 by the fire department, 157 E. 67th St., for furnishing two first size and two third size La France steam fire engines; two first size and two third size Metropolitan steam fire engines; one 65-ft. Hale water tower, three top sections for Hale water tower and one La France portable electric searchlight. J. J. Scannell, Comr.

LATHE AND MILLING MACHINE.—Beaver Falls, Pa.—The Keystone Drill Co., Beaver Falls, will soon be in the market for a lathe 16-in. swing, 6 ft. between centers; taper attachment with 12-in. independent chuck; a steam hammer, 1,500 lb., with about a 27 to 30-in. stroke, and a milling machine for milling grooves in the outside of a wheel of 52-in. diameter, and for milling cog-gearing.

MONUMENT.—New York, N. Y.—The following bids were received Jan. 26 for erecting the Soldiers' and Sailors' Memorial Monument in Riverside Drive; J. H. Goulden, Comr., Arsenal, Central Park: J. H. Deeves & Bro., 22d St. and 4th Ave., $210,826; J. D. Murphy, $211,404; Norcross Bros., $230,000; E. Lentilliion, $239,134; United Engineering & Contracting Co., $253,420; National Contracting Co., $285,000.

LOCK GATE.—St. Paul, Minn.—We are informed that the folowing bids were received Jan. 22, at the office of the U. S. Engineer, 418 Globe Bldg., for furnishing material and constructing a lock gate, as stated in our advertising columns: J. G. Wagner Co., Milwaukee, Wis., $8,153; Chicago Bridge Co., Washington Heights, Ill., $11,650; Wisconsin Bridge & Iron Co., Milwaukee, Wis., $7,718; New Jersey Foundry & Machine Co., 26 Cortlandt St., New York, $12,250; St. Paul Foundry Co. (recommended for award), St. Paul, Minn., $7,643; Gillette-Herzog Co., Minneapolis, Minn., $8,400.

RIVER AND HARBOR.—Washington, D. C.—A decision against a river and harbor bill at the present session was made Jan. 30 by the House Committee on Rivers and Harbors. Information was received from the War Department that little work had been done upon the projects authorized in the last bill, and that in many cases bids had not been asked. It was stated that the department had at its disposal about $30,000,000 appropriated under previous bills, and that the Sundry Civil bill to be passed at the present session would appropriate over $15,000,000 for works already authorized under the continuing contract system. The department would thus have at its disposal for the remainder of the present fiscal year and the fiscal year which begins with July about $45,000,000.

FOREIGN CONTRACTS AND EXPORT NEWS.

GLASGOW, SCOTLAND.—Bids are asked until Feb. 5 for furnishing two overhead electric traveling cranes for the Corporation Tramways; deposit for forms, 2 guineas, to be returned on receipt of bona-fide tender. John Young, Gen. Mgr., 88 Renfield St.; Sir J. D. Marwick, Town Clk. We are officially informed, under date of Jan. 10, that the corporation expected to soon ask for tenders for furnishing from 200 to 300 sets of complete motor equipments and trucks and for the overhead construction necessary for the electric tramways. The following list of contracts already let for the work of equipping the tramways for overhead electric traction has also been sent us: Two main engines, E. P. Allis Co., Milwaukee, Wis., £57,282; two main engines, Musgrave & Sons, Bolton, Eng., £47,758; three-phase generators, British Thomson-Houston Co., London, £25,678; auxiliary generators, same, £5,343; exciter generators, same, £1,711; water tube boilers, Babcock & Wilcox Co., Glasgow, £21,280; transformers, Westinghouse Co., Ltd., London, £19,983; rotary converters and boosters, same, £39,216; surface condensers and pumps, Mirrlees, Watson & Yaryan Co., Ltd., Glasgow, £14,422; water pumps, Mavor & Coulson, Glasgow, £2,283; steam pumps, G. & J. Weir, Glasgow, £480; switchboards, Westinghouse Electric Co., Ltd., £32,213; constructional steel work for power station, Riter-Conley Mfg. Co., Pittsburg, Pa., £25,000; portion of brick work for power station, A. Thomson & Son, Glasgow, £15,231; auxiliary engines, D. Stewart & Co., Glasgow, £7,870; fuel economizers, Clay Cross Mfg. Co., Chesterfield, Eng., £2,240; cables (high and low tension), National Conduit & Cable Co., Ltd., New York, £150,617; exciter engines, with spares, W. H. Allen, Son & Co., Bedford, Eng., £3,054; overhead cranes, Clayton Engineering & Mfg. Co., Ltd., £5,610. The special work required for permanent way, and T-rails for depots, has been secured by the Lorain Steel Co., Lorain, Ohio. The contracts for the greater portion of the reconstruction of the permanent way have been fixed, and already about 15 miles of double track have been completely renewed with a heavier section of rail than was formerly in use. The ducts for the feeder cables for this distance have also been laid and the rails bonded. The greater number of the cars required are being built in the corporation's own workshops, but, as it is not yet in a position to turn out more than three complete cars per week, it has placed an order for 80 cars with the Gloucester Railway Carriage & Wagon Co., Ltd., Gloucester, Eng. The car equipments for a portion of the cars required have been ordered from the Westinghouse company. Referring to the matter regarding the deposit, which has to be lodged by all applicants for schedules, it has been the practice of the Glasgow Corporation to ask for such a deposit as a security for the bona-fides of the applicants. In the event of the intending offerer finding, after seeing the specifications, that he is not in a position to make a quotation, and immediately returning the specification, etc., to the tramway department, the deposit is invariably returned. Our informant also states as follows: "You will observe from the list of successful contractors that Americans have an equal opportunity with home people of securing any of the different contracts advertised, and, in fact, several of the larger contracts have, as you will see, been secured by American firms."

ENGLAND.—It is stated that the following applications for electric tramways have been granted: Aldershot & Farnborough Power & Traction Co., Ltd., Aldershot; British Electric Traction Co., Norfolk St., Strand, London, for lines in Barnsley, Dudley, South Staffordshire, Spen Valley, South Staffs, etc.; T. Nevins, Cheltenham; Doncaster Corporation, W. H. Crabtree, Surv.; Drake & Graham Power & Electric Traction Co., East Anglaise; Hastings, Benhill & District Light Ry. Co., Hastings; Isle of Thanet Light Ry. Co., Isle of Thanet; Nedson Corporation, B. Ball, Surv.; Rhyl & Prestatyn Light Ry. Co., Rhyl; Southend Corporation, Southend-on-Sea, Alfred Fidler, Surv.; Metropolitan Tramways & Electric Co., Waltham Cross; Barrowford Urban District Council; J. Booth and G. Brodie, Bromsgrove; Imperial Tramways Co., Darlington; Gateshead & District Tramways Co., Gateshead; Nuneaton & District Light Ry. Co., Nuneaton; T. O. Callender and A. Wright, Ormskirk, etc. Other reports state that the following work is proposed by the larger corporations: London County Council, to cost about $2,200,000. Alfred Baker, Tramway Mgr. London, C. C.; Manchester, about $4,300,000, C. H. Wordingham, Mgr. and Elect. Engr.; Huddersfield, about $2,250,000, A. B. Mountain, Elec. Engr.; Croydon, about $700,000, Thos. Walker, Borough Engr.; Preston, about $675,000, Thos. Cookson, Surv.; Motherwell, about $1,000,000, Jas. Burns, Town Clk.; Rochdale, about $650,000, S. S. Platt, Borough Surv.; Dundee (Scotland), $1,100,000, W. H. Titterton, Elec. Engr.; Reading, $650,000, John Bowen, Engr.; Ipswich, $535,000, E. Buckham, Surv.; Cambridge, $425,000, E. W. Harry, Surv.; Southport and Lytham County, Southport, about $1,000,000.

BATH, ENG.—Bids are asked until Feb. 12 for furnishing cables, lamps, posts, switchboards, etc., for a complete plant. G. F. Metzer, Cy. Elec. Engr.; F. H. Moger, Clk. Fred. Stevens, Town Clk., of Bradford, has received bids for about eight miles of overhead equipment for the tramway.

GREAT YARMOUTH, ENG.—Bids are asked by the town clerk until Feb. 15 for furnishing two water-tube boilers and three 200-K-W. continuous-current steam dynamos. Preece & Cardew, Engrs., 13 Queen Annes-gate, Westminster, S. W., London.

BERLIN, GERMANY.—Bartzsch & Co., 103 Leipzigerstrasse, have received a concession from the Mayor of Alt-Landsberg (Prussia), for a plant to supply the above and surrounding villages with electric light.——It is stated from Berlin that a plant of 30,000 HP. will be established at Lauffenburg, on the Rhine, for industrial purposes.——The Berlin elevated railroad intends to introduce electric motive power, at the expense of 43,000,000 marks. The projected system will be modelled after the Chicago South Side R. R.

LONDON, ENG.—Bids are asked until Feb. 5 for laying the underground conduits and pipes for telephone purposes in several parts of the metropolis. C. E. Stuart, Controller of Stores, General Post Office.

EDINBURGH, SCOTLAND.—Bids are asked until Feb. 12 for furnishing gas exhausters and mechanical accessories for the gas works at Granton. J. McG. Jack, Clk.

PARIS, FRANCE.—E. B. Hotchkiss, staying at the Hotel Imperial, Broadway and 32d St., New York, writes us that the machinery he is purchasing covers all lines of wood and metal working machinery. He expects to sail for Europe Feb. 6. The address of Ad. Janssens, who he represents, is 16 Place de la Republique, Paris, France, and the Brussels address is Boulevard Barthelemey, 10 A, Brussels, Belgium. Mr. Janssens is an authorized agent for Holland, Belgium, Switzerland and France for a large number of American machine tool manufacturers.

BERLIN, GERMANY.—E. B. 2082, care of Rudolf Mosse, Berlin, wants bids for furnishing 3,000 kgs. (6,600 lbs.) of hard fiber.

COLOGNE, GERMANY.—Bids are wanted at once by H. F. 1857, care of Haasenstein & Vogler, A. G., Cologne, Germany, for furnishing 1,000 tons of foundry raw iron c. c. f. Rotterdam, Holland; also for furnishing O., 5054 Q. X, care of same firm, at Basle, Switzerland, pig iron, loops, blooms, billettes and wire rods, to be delivered during first and second quarter of the year.

TOULA, RUSSIA.—La Societe des Laminoirs de Toula has been formed in Brussels, Belgium, by the Societe Metallurgique d'Esperance Longdoz, capital $1,000,000, to establish rolling mills at Toula, according to reports.

VIGO, SPAIN.—It is stated that La Sociedad Electrica Gallega, Vigo, Spain, has been formed to build works for the production of calcium carbide, as well as to manufacture electrical supplies.

LEICESTER, ENG.—Applications are wanted until March 10 for the engagement of an engineer to prepare plans for the proposed works for the Denvent Valley Water Board, to consist of six reservoirs, subsidiary works, etc., to have a supply of 50,000,000 gallons of water a day. Jas. Bell, Clk. Bd., Rowton Bldgs., Bowling Green St.

AYR, SCOTLAND.—A committee is reported to have been appointed to investigate the question of electric tramways, with a view to adopting a system. Population, 25,000. John Eaglesham, Surv.

WIGAN, ENG.—The Corporation's scheme involves the expenditure of about $400,000 for electric lighting, and $200,000 on two lines of tramways. The probable expenditure in the future, which will include the working by electricity of the whole of the Wigan and district tramways, is estimated at about $1,800,000. Wm. Bolton, Borough Surv.

CARDIFF, WALES.—The committee is reported as in favor of electric tramways, and the question of the combined station for furnishing both power and light is being considered. Estimated cost, $1,250,000. N. Appelbee, Elec. Engr.

ZURICH, SWITZERLAND.—Frote & Westermann, Vogelsangstrasse 50-4, have received a concession for an electric railway from Samaden to Campocologno, with branch lines from Pontresina to St. Moritz. Our correspondent states that construction will soon be commenced.

BIELEFIELD, GERMANY.—The government has granted a concession to this municipality for an electric street railway from Brackwede via Bielefeld to Schildesche. The road is to be completed this fall.

RUSSIA.—We are officially informed that surveys are being conducted on the left bank of the Ural River for a line from Orenburg to Taschkent, and also for a line along the Amoo River to Tschardschin. The date of letting contracts or the estimated cost of the construction has not yet been determined upon. The Trans-Siberian Ry. is completed as far as Sretensk, thus establishing a through steam communication by rail and water to Vladivostok. A link skirting Lake Baikal is projected and is being surveyed. In the meantime the passage across the lake will be effected by means of a raft carrying the train from one shore to the other. J. Balaschoff, Secy. Administration of Railways, Fontanka 117, St. Petersburg; V. A. Messoyedoff-Ivanoff, Pres. and Chief Engr.

NAPLES, ITALY.—Cook & Son, tourist agents, New York, N. Y., and London, Eng., have secured a concession for a railway connecting Naples with the Mountain of Vesuvius.

DENMARK.—The State Ry. Department invites bids for supplying 51 passenger cars, 25 baggage cars, 19 postal cars and 400 freight cars. Bids for 4,900 tons of rails and fastenings were received Jan. 27. O. V. Tegner, Gen. Dir., Helgolandsgade 12, Copenhagen.

SWITZERLAND.—The "Journal des Transports" states as follows concerning the railway to carry tourists to the top of Mont Blanc: The line from the Fayet to Chamounix, the construction of which has already been undertaken, will be worked by electricity, the cars being automotors. The starting station of the Mont Blanc R. R. will be situated near the end of the electric tramway, near the hamlet of Taconnas, 1,100 meters above the sea. A tunnel of 5 kilometers will bring the travelers to the summit of the needle of the Gouter, at 3,840 meters elevation. Balconies will be established along the open road leading to divers points in order to provide for the passengers a view of the mountains. A hotel and station will be built on the needle of the Gouter. The total length of the road will be 10 kilometers, and it will cost 21,000,000 francs. It is expected that in July, 1902, the tourists will be transported as far as the dome of the Gouter—that is, to an altitude of more than 3,500 meters.

HSENWI, UPPER BURMA, INDIA.—An iron bridge is to be erected here over the Namtu River, to cost about 25,000 rupees. T. Higham, Joint Secy. Pub. Wks. Dept., Calcutta.

IMAICHI, JAPAN.—The San-in Basha-Tetsudo Kabushiki-Kaisha has been formed, capital $50,000, to build a tramway. The promoters will also establish a water power electric company, with a capital of $100,000, at Ottatsu-Mura, in the same province, and should the experiment in electric enterprise prove profitable the tramway will be changed to one on the electric system. James Favre-Brandt, 10 Concession, Osaka, is interested.

JAPAN.—The Kansai Ry. Co. has decided to extend the line from Amijima to Umeda, to cost $400,000, and from Hamada Station to Matsuya, Osaka, to cost $500,000; gage, 3 ft. 6 ins. M. Nawa, Ch. Engr., Yokkaichi, Japan.——The capital of the Japanese Sobu Ry. Co., Tokyo, has been increased by $600,000, in order to duplicate its line between Houjo and Sakura, 31½ miles.

INDIA.—We are informed that the directors of the South Indian Ry. have sanctioned the survey of the proposed line from Trichinapaly to Turnkoilwi, about 110 miles. Work will be begun immediately. The South Indian Ry. having been empowered to enter into contracts with the Secretary of State for the construction of two branch lines, each about 100 miles long, from Madura to Pamban, and from Tinnevelly to Quilon, state of Travancore, has surveyed these lines. The Quilon branch is in hand and work will be begun on both ends at once. Surveys have been completed for a line from Erode to Nanjangode, about 80 miles, to connect the South Indian Ry. with the Southern Mahratta. Sir Geo. A. Bruce, Consult. Engr., 3 Victoria St., London, S. W.; W. H. Spalding, Ch. Engr., Trichinopoly, India.——A preliminary survey has been made of a line from Kalipiri, west of Papala Junction, on the South Indian Ry., to Royachoti, about 32 miles.——Killock, Nixon & Co., 34 Elkinstone Circle, Bombay, have obtained a concession and are forming a company to construct a railway from Sabarnati and Ahmedabad to Dholka, in all 125 miles.——The Bombay Port Trust, C. T. Burke, Chn., of Ballard Road, has projected a scheme for improving the railway and shipping facilities of Bombay. It is proposed to build a railway to the docks extending from the Lion Junction of the Great Indian Peninsula Ry. System and a branch line from Mahim (a suburb), connecting the Bombay Baroda & Central India Ry. with the Port Trust's railway at Lion. The docks will be enlarged. Total estimated cost, $735,000.——The Government has decided to allot $210,000 to the Burma Rys. Co., Ltd., for the line from Bassein, in Lower Burma, to Henzada, and from there to Tharawaddy, 90 miles.——Surveys of the last section of the Mandalay-Kunlon section of the Burma Rys., about 200 miles, are being made.——Estimates and reports of the proposed line from Kinu, through the coal fields to Thabetpyin, 20 miles, have been completed by the Burma Rys. Co., W. D. Barrows, Deputy Ch. Engr., of Rangoon.——The Directors of the Madras Ry. (5 ft. 6 in. gage) have undertaken to construct, at the expense of the Cochin Durbar, a line from Shoranur to Cochin, about 50 miles. E. W. Stoney, Ch. Engr., Madras.——The Bombay, Baroda & Central India Ry., Sir A. M. Rendal & Sons, Consult. Engrs., 8 Great George St., London, S. W., will soon begin building a line from Godhra to Baroda, about 40 miles, and another from Kalol to Vijapur, 30 miles.

STRAITS SETTLEMENTS.—The Government has decided to construct a 14-mile line from Penang to Krauji; estimated cost, $1,000,000. J. H. Callcott, Deputy Colonial Engr. and Surv.-Gen., Penang, S. S.

CEYLON.—We are informed in reply to our inquiry for the name of the successful bidder for constructing the northern extension of the railway in Ceylon, for which bids were opened Jan. 4 by the crown agents for the colonies, that it is not the custom to publish the result of tenders made to them. In all cases where open tenders are desired the agents invite them by advertisement in English papers, and, unless any restriction is mentioned, offers from contractors are considered. Sir Montagu F. Ommanney, Ernest Edward Blake and Maj. M. A. Cameron, R. E., Crown Agents, Downing St., London.

CHINA.—We are officially informed that the following report is correct: The plans of the American-China Development Co. to build the Canton-Han-Kow Ry., and in which the syndicate organized by the late Senator C. S. Brice and other N. Y. capitalists are interested, were made public Jan. 8 by Clarence Cary, of Cary & Whitridge, 59 Wall St., New York, who recently returned from a visit to China in the interests of the syndicate. He said that more definite arrangements had been concluded on the contract with the Chinese officials, especially regarding certain coal-mining contracts in the Yangtse valley, the scene of the concession. The road, as surveyed, is about 900 miles long, and is designed to be the trunk line of a future railway system. It starts from Canton, and there is a vast population already within its territory, occupying one of the chief centers of rice, cotton, opium, and other productions, with ample coal-fields, as yet com-

paratively untouched, near at hand. No arrangements for the contracts have yet been made. The survey party is now in the field making surveys. Wm. Barclay Parsons, Ch. Engr., 22 William St., New York.

CUBA.—The work on extending the Western Ry. of Havana will soon be commenced as the surveys have been completed. The present terminus is Pinar del Rio. E. H. Parsons, Gen. Mgr., Havana; A. P. Livesey, Res. Engr., Havana.

ARGENTINA.—Our correspondent informs us that the Bolivian Government has authorized the extension of the Northern Argentine Ry. (meter gage) to Oruro, 280 miles from the Argentine border. Juan V. Cilley, Gen. Mgr., Cruz del Eje, Cordoba, Argentina.——The Buenos Ayres Western Ry. (5 ft. 6 in. gage) proposes to extend its line from General Villegas to Trenel, 50 miles, and are now negotiating with the South American Land Co. regarding the territory to be used. David Simson, Gen. Mgr., Buenos Ayres.

CUBA.—Reports state that on Feb. 1 the Cuban Ry. Co., Ltd., Havana, and Cienfuegos, will absorb the Caibarien Ry. and the Cienfuegos-Santa Clara Ry. Certain improvements will be made by the company. Ramon Arguelles, box 516, Havana, Cuba, was President of the latter company, and F. B. Pavon, Caibarien, Cuba, General Manager of the first mentioned line.

PUERTO RICO.—The "Journal of Commerce" states as follows: Fox Bros. & Co., 24 Vesey St., New York, have closed a contract for building a railway which eventually will connect Mayaguez with San Juan. At first a line will be built from San Juan to a point some 40 miles in the direction of Mayaguez; ultimately the road will be about 75 miles long. The enterprise is being financed by American capital. The contractors will this week let a number of contracts for material and equipment for the new project. The order for rails, comprising 36 miles of 36-in. gage track, has been given to the Pennsylvania Steel Co. The American Car & Foundry Co., 71 Broadway, New York, will furnish 30 cars, while Robert Throp, Three Rivers, Mich., will supply hand and inspection cars. The purchase of two lighters and a large steam crane is now under consideration. A dock will be built at San Juan, so as to facilitate the handling of freight between the road and vessels receiving cargo. Lighters, cranes, etc., will therefore be required. The railway will open up a country rich in timber and minerals. Two sawmills, to be placed at points along the line, will be constructed by the Curtis & Curtis Mfg. Co., St. Louis, Mo. The line will skirt the coast for some little distance from both termini. It is the intention of the promoters to found a colony at and around the furthest inland point to which the road will operate.

MEXICO CITY, MEX.—Ignacio de la Torre y Mier, banker, Calle 8. Agustin 13, has obtained a concession to utilize the water of the Cuautla River at Cuautla to generate electric power.

WEST INDIES.—The Aruba Gold Concession, Ltd., will work gold, silver and copper mines and will construct railways, tramways, furnaces and smelters in the island of Aruba. Wm. T. Garland, Secy., The Rowans, Colyton road, Foresthill road, London, S. E., Eng.

SALTILLO, MEX.—Bids are asked by Alfred Giles, of San Antonio, Tex., until Feb. 13 for constructing a steel building for the Bank of Coahuila, to cost about $100,000, according to reports.

BUENOS AYRES, ARGENTINA.—We are informed that the Anglo-Argentino Tramway Co., Calle Rivadavia 3583, has asked for permission to change its traction to the electric system. It also asks to be allowed to go nearer the docks and build the streets necessary for this purpose.——Carlos Bright, Cuyo 874, this city, who was recently granted a concession for an underground electric line from the Southern Ry. station to the Retiro and from the Western Ry. station to Plaza Victoria, has formed a company and will soon commence the work.

NEW SOUTH WALES.—The Public Works Committee has sanctioned several light railways as follows: Lines from Grenfell to Wyalong, 50 miles; from Cobal to Broken Hill; from Larribri to Walgett, 130 miles; the completion of the Cooma line to the Victorian border; a line from Wellington to Werris Creek, 6 miles; a line to connect the north coast with the tableland of New England; lines from Dubbo to Coonamble and branches to the Upper Murray, from Goulburn to Crookwell, from Gundagai to Tumut, from Glen Innes to Inverell and from Walcha-road to Walcha. J. H. Young, Secy. Pub. Wks.; H. Deane, Engr. Ry. Construction, Sydney, N. S. W.

CONTRACT PRICES.

LOCKS AND DAMS.—Warrior River, Ala.—The United States Engineer, Tuscaloosa, Ala., received the following bids Jan. 20, for constructing locks and dams Nos. 4, 5 and 6 for the Warrior River improvement:

Bids Received at Tuscaloosa, Ala., Jan. 20, 1900, for Construction of Lock and Dam No. 4, Warrior River.

Quantities.		McArthur Bros. Co., Chicago.	Coyne, Cornwell & Monnish, Tuscaloosa, Ala.	Spotswood & Hartwell, Mobile, Ala.	Baker & Smith, Syracuse, N.Y.	Christie, Lowe & Heyworth, Chicago.
Concrete	11,300 cu. yds.	$7.50	$11.00	$9.50	$6.48	$5.95
Excavation	140,000 " "	.50	.40	.50	.35	.28
Gravel filling	3,900 " "	.75	1.00	1.00	1.00	.42
Puddling	100 " "	1.50	1.25	1.25	2.00	.60
Mattress work	6,200 sq. yds.	.90	1.00	1.00	.50	.48
Miter sills	4,000 ft. B.M.	44.00	50.00	45.00	50.00	36.00
Dam timber	155,000 " "	29.00	40.00	32.50	30.00	29.00
Apron timber	67,000 " "	24.50	27.50	30.00	25.00	19.20
Floor timber	112,000 " "	30.00	32.50	35.00	35.00	40.00
Sheathing	20,000 " "	20.00	50.00	30.00	20.00	17.00
Sheet piling	275,000 " "	30.00	60.00	40.00	50.00	50.00
Foundation piles	44,000 lin. ft.	.32	.40	.25	.20	.29
Heart piles	2,000 " "	.34	1.00	.50	.25	.30
Drain pipe	500 " "	1.00	.60	.28	.50	.50
Grubbing and clearing, complete		200.00	5,000.00	4,600.00	1,000.00	240.00
Total		$202,688	$244,808	$227,063	$164,569	$149,454
Alternative quantities:						
Stone filling	3,100 cu. yds.	2.00	5.00	2.50	3.75	1.14
Stone paving	1,150 " "	7.00	5.50	6.50	3.75	2.70
Rip-rap (hand placed).	2,100 " "	2.50	5.25	3.50	3.25	1.20

The following are the bids for locks and dams Nos. 5 and 6, where the figures differ from those for lock and dam No. 4; (1) being for concrete, quantities—12,300 and 11,200 cu. yds. for Nos. 5 and 6, respectively; (2) for excavating, 45,000 and 76,000 yds.; (3) for gravel filling, 4,400 and 4,000 sq. yds.; (4) for puddling, 100 cu. yds.; (5) for mattress work, 3,600 and 5,000 sq. yds.; (6) for miter sills, 4,000 ft. B.M.; (7) dam timber, 171,000 and 155,000 ft. B.M.; (8) for apron timber, 67,000 ft. B.M.; (9) for floor timber, 112,000 ft.B.M.; (10) sheathing, 20,000 ft.B.M.; (11) for sheet piling, 270,000 and 275,000 ft.B.M.; (12) for foundation piles, 50,000 and 55,000 lin. ft.; (13) for heart piles, 2,000 and 2,100 ft.; (14) for drain pipe, 500 ft.; (15) grubbing and clearing, complete; (16) for totals; (17) stone filling, 3,600 and 3,200 cu.yds.; (18) stone paving, 1,650 and 950 yds.; (19) rip-rap (hand placed), 1,200 and 1,700 yds.; the last three being alternate quantities: McArthur Bros. Co., Chicago (16) $162,857 and $172,487, respectively for Nos. 5 and 6; Coyne, Cornwell & Monnish, Tuscaloosa, Ala., No. 5—(1) $10, (2) 50 cts., (4) $1.25, (7) $37.50, (8) $25, (9) $30, (11) $50, (15) $2,000, (16) $204,073; No. 6.—(3) 70 cts., (7) $35, (8) $25, (9) $30, (12) 50 cts. (15) $4,000, (16) $219,985, (17) $4, (18) $4.50, (19) $4.25; Spotswood & Hartwell, Mobile, No. 5—(1) $9, (16) $182,633; No. 6—(16) $190,213; Baker & Smith, Syracuse, N. Y., No. 5—(2) 30 cts., (16) $145,179, (17 and 18) $3.00, (19) $3.10; No. 6—(2) 40 cts., (16) $147,046, (17 and 18) $3.50, (19) $3; Christie, Lowe & Heyworth, 171 La Salle St., Chicago, No. 5—(1) $6, (2) 32 cts., (16) $152,135; No. 6—(1) $6, (2) 31 cts., (11) $47, (16) $155,640.

WATER PIPE.—Nyack, N. Y.—We are informed that the following bids were received Jan. 24, 1900, for (1) 148 tons of 2 to 12-in. cast-iron water pipe and (2) seven tons of specials: Warren Foundry & Machine Co., 160 Broadway, New York, (1) $27 a ton; (2) $50 a ton (accepted); R. D. Wood & Co., Philadelphia, Pa., (1) $30; (2) $50; M. J. Drummond & Co., 192 Broadway, New York, to be cast hub up, (1) $27; (2) $50; McNeal Pipe & Foundry Co., Burlington, N. J., (1 and 2) $31.95. The material is to be delivered between April 1st and 20th. G. N. Houston, Supt. and Engr.

WATER METERS.—Rochester, N. Y.—The Thomson Meter Co., 79 Washington St., Brooklyn, N. Y., is reported to have been awarded the contract at $4,350 for furnishing 500 water meters, this being the lowest price ever paid by the city. Bids for furnishing 50 Mathews hydrants are wanted by Commissioner Grant, of the Department of Public Works.

WATER PIPE.—Boston, Mass.—W. E. Swan, Secy. Water Comr's. office, writes us that the following bids were received Jan. 24, 1900, for furnishing (1) 15 tons of 4-in., 600 tons of 6-in., 500 tons of 8-in., 150 tons of 10-in., 330 tons of 12-in., all B., 700 tons of 12-in., 500 tons of 16-in., 200 tons of 30-in., all A; and (2) 5 tons of specials: Warren Foundry & Machine Co., New York, (1) $26; (2) $44 a ton; total, $78,090; U. S. Cast-Iron Pipe & Foundry Co., The Rookery, Chicago, (1) $26.30; (2) $45; total, $78,994; Camden Iron Works, Camden, N. J., (1) 4-in., $27.70; 6, 8 and 10-in., $26.82; 12 to 30-in., $26.14; (2) $59 a ton; total, $79,458.

BRIDGE BORINGS.—New York, N. Y.—The following bids were received Jan. 31, 1900, by J. L. Shea, Comr. Bridges, 21 Park Row, for soundings and borings on sites of towers of proposed bridges over the East River, No. 3 between Manhattan and Brooklyn, and No. 4 between Manhattan and Queens: Item A for that part from bed of river to depth below mean low water; B, 100 ft. to 125 ft; C, 125 ft. to 150 ft.; D, 150 ft. to 175 ft.; E, 175 ft. to 200 ft., and F for depth of water from mean low water to bed of river, and (1) being for bridge No. 3, and (2) for bridge No. 4: R. G. Packard, 130 Pearl St., bid $14.95 a ft. for both rock and soft material, at all depths, on both bridges; B. W. Mitchell, 1 Broadway, bid same price on both materials and bridges, A, $25; B, $5; C, D, and E, $1; F, $25; Munn & Copeland, (1 and 2) A, $13.50 for rock; A (1), $9, (2) $9.25 for soft material; B, $14.50 for rock; $10 for soft material; C, $15.50, $11; D, $16.50, $12; E, $17.50, $13.50; F, $9; (2) A, $13.75 for rock, $9.25 for soft material; B, $14.75, $10.25; C, $15.75, $11.25; D, $16.75, $12.25; E. $17.75, $13.75; F. $9.25; B. Roft, 39 Cortlandt St., (1) $20 A to E, inclusive, for rock, and $10 for soft material; F, $3; (2) rock $25, soft material $15; both A to E, inclusive; F. $2.

PUBLIC LIGHTING.—East Orange, N. J.—S. M. Long, Cy. Clk., writes us that the following bids were received Jan. 29, 1900, for public lighting for five years from June 1: Gas Lighting—Essex & Hudson Gas Co., Newark, 3 years from June 1, 1900, for 600 gas lamps with Welsbach lights, $29.50 each per annum; 840 lamps, ordinary gas burner, $18.50 per anunm each. Electric Light—Geo. S. Hulbert, East Orange, for 1,440 incandescent lamps, in the present lamp posts, $32.50 for each lamp of 50 c. p., or lamps of 100 c. p., $60 per annum per year; contract to be for 5 years from Nov. 1. 1901; current to be distributed by copper and aluminum wires, cables laid in conduits below frost lines; at end of 10 years, city to have option of purchasing plant at advance of 10% over total cost. He to have exclusive privilege of city streets and house electric lighting, for a term of 5 years; city to receive 1% of net earnings first year, and an additional 1% each year, until the compensation reaches 5%, and maintain 5% annually during life of franchise, or until city purchases plant.

PLACING STONE.—Bar Harbor, Me.—We are informed that the U. S. Engineers received the following bids Jan. 30, 1900, for placing stone in the breakwater for which $20,000 has been appropriated: Harries & Letteney, Boston, 92 cts. a ton of 2,000 lbs.; W. S. White, Rockland, Me., 78 cts.; Cleaves & Hamilton, Chebeague Island, Me., 83½ cts.

ENGINEERING MATERIAL PRICES

TRACK MATERIAL—
Chicago—Steel fish-plates, 2.50 to 2.70 cts.; spikes, 2.75 to 2.85 cts; track bolts, 3.65 to 3.85 cts.
Pittsburg—Steel fish-plates, 2.50 to 2.60 cts.; spikes, 2.50 cts.; track bolts, 2.60 to 3.85 cts.

RAILS, STEEL—
New York, new, $35; old iron, $23.50 to $24; old steel, $18.50 to $20.
Chicago, new, $35 to $38; old iron, $26 to $27; old steel, $19 to $24.
Pittsburg, new, $35 to $40; old iron, $29 to $31; old steel, $22 to $24.

STRUCTURAL STEEL—
New York—Beams, 2.40 to 2.50 cts.; channels, 2.40 to 2.50 cts.; tees, 2.40 to 2.45 cts.; angles, 2.40 to 2.45 cts.
Chicago—Beams, 2.40 to 2.50 cts.; channels, 2.40 cts.; tees, 2.45 cts.; angles, 2.40 to 2.50 cts.
Pittsburg—Beams, 2.25 to 2.35 cts.; channels, 2.30 cts.; tees, 2.30 cts.; angles, 2.25 cts.; zees, 2.25 cts.

PLATES AND SHEETS—
New York—Universal mill plates, 2.65 to 2.75 cts.; tank, 2.65 to 2.75 cts.; shell, 3 to 3.10 cts.; flange, 3.15 to 3.30 cts; firebox, 3.75 to 4.00 cts.
Chicago—Universal mill plates, 2.60 to 2.70 cts.; tank, 2.65 to 2.70 cts.; shell, 2.75 to 2.80 cts.; flange, 2.80 to 3.00 cts; firebox, 4.00 to 6.00 cts.; sheets, 3.00 to 3.15 cts.
Pittsburg—Universal mill plates, 2.50 to 2.75 cts.; tank, 2.40 to 2.60 cts.; shell, 2.60 to 2.70 cts.; flange, 2.70 to 2.80 cts.; sheets, 2.95 to 3.00 cts.

MERCHANT STEEL—
Machinery, per lb., 2.95 to 3.05 cts.

IRON—
Pig iron:
New York—No. 1, $25; No. 2, $22.
Chicago—No. 1, $25 to $25.50; No. 2, $24.50 to $25.
Pittsburg—No. 1, $23.75 to $24; No. 2, $23 to $23.25.
Bar iron:
Pittsburg—2.25 to 2.40 cts.

LUMBER—
New York:
Hemlock timber, 20 ft. and under, per M, $16.00.
Piling, Eastern spruce, 35 to 40 ft., 30 to 40% 12-in butts, 5 cts.
Yellow pine, random cargoes, $23 to $26.
North Carolina pine, $3.00 to $4.00 advance over Norfolk rates.
San Francisco:
Oregon pine, per M, $16 to $18.
Redwood, per M, $20 to $22.
Redwood tank stock, up to 10 ft., $17.

GENERAL MATERIALS—
Lead, New York, 4.70 to 4.75 cts.
Solder, per lb., 14½ to 15 cts.
Spelter, per lb., 4.75 cts.
Copper ingots, 16.50 cts.

INDUSTRIAL NOTES.

THE HANCOCK INSPIRATOR CO., Boston, announces that its general offices and salesrooms have been removed to 85-89 Liberty St., New York.

THE CONTINUOUS RAIL-JOINT CO. OF AMERICA, Newark, N. J., has removed its offices from 164 Market St., to 908-911 Lawyers' Building.

SAMUEL H. BRUBAKER & CO., Stevenson Bldg., Indianapolis, have prepared plans for a manufacturing building for the Power Publishing Co., to cost $300,000.

THE FERRACUTE MACHINE CO., Bridgeton, N. J., has shipped a carload of 14 presses, etc., to the Paris Exposition. Another carload will be sent in about a month. The company will have three exhibits of its machinery in Paris.

THE NEW YORK AIR COMPRESSOR CO., 120 Liberty St., New York, reports sales of over ten air compressors in as many days. These include a large duplex compressor for Japan, and four compressors of 1,200 cu. ft. capacity for the Pennsylvania R. R.

THE INTERCHANGEABLE BRAKEBEAM CO., of St. Louis, Mo., has had the suits against it decided in its favor by Judge Adams, of the U. S. Court. The company had been sued by the Chicago Railway Equipment Co. and the National Hollow Brakebeam Co., both of Chicago, on the ground of infringements of their patents.

THE INTERNATIONAL POWER CO., Providence, R.I., has recent orders for 10 locomotives for the Fitchburg, 10 for the Boston & Maine, 10 for the Seaboard Air Line, 6 for the Mexican Central, 12 for the Chicago Great Western, 13 for the Colorado & Southern, and 2 for the Dominion Iron & Steel Co., and also about $400,000 worth of orders for its stationary engine works.

THE SPRAGUE ELECTRIC CO., New York, has contracted to furnish and install complete, for the Plymouth Cordage Co., two 75-K-W. direct-connected generating sets, each consisting of a 14 × 14 Ames engine and a 75-K-W. split-pole generator. It reports also an order for two 30-K-W. generators to be used in the works of the Whitehall Portland Cement Co., at Cementon, Pa., and an order from one of the Sound steamboat companies for a Lundell generator to furnish 250 lights for one of its steamers.

THE ROBINS CONVEYING BELT CO., 147 Cedar St., New York, has recently purchased a factory and machine shop at Passaic, N. J., on the line of the D., L. & W. R. R. All the belts, idlers, pillow blocks, take-ups, trippers and other parts of their machinery will in future be made and shipped from Passaic and a large stock will be carried on hand. It will also afford abundant room for the experimental work which this company is constantly conducting in the adaptation of its conveyors to new services.

THE HORNISH MECHANICAL BOILER CLEANER CO., 908 Masonic Temple, Chicago, announces that its boiler cleaner has been applied to some meter gage locomotives recently built for the Mu Valley line Burma Rys. by Neilson & Co., Hyde Park Locomotive Works, Glasgow, Scotland. The engines have four coupled wheels and cylinders 14 × 20 ins. The boilers are of somewhat peculiar construction, having two mud holes or manholes in the bottom, a horizontal plate brace across under the steam pipe at the smokebox tube plate, and sloping grates of rather steep pitch. The dome proper is riveted to a heavy flanged casting riveted to the boiler shell. From the general design it would appear that very bad water is used. The Hornish device, which was described and illustrated in our issue of Feb. 9, 1899, consists essentially of a skimming basin and blow-off placed close to the smokebox tube plate, and suction heads placed in the water legs, just above the mud ring, and connected to another blow-off. The device has been somewhat extensively applied in this country, and is the invention of Mr. F. W. Hornish.

EXHIBITS AT THE CONVENTION OF THE ILLINOIS SOCIETY OF ENGINEERS AND SURVEYORS.

At the annual convention held at Moline, Ill., Jan. 24 to 26, the number of exhibitors was small, but the exhibits made a good showing:

Assyrian Asphalt Co., Tacoma Building, Chicago, Ill.—An extensive line of samples of asphalt products for pipe coating, roofing, paving and other purposes.

Berry Flush Tank Co., Iowa City, Ia.—Circulars of the flush tank and sewer pipe hook recently described in our columns.

Keuffel & Esser, 111 Madison St., Chicago, Ill.—Engineering and surveying instruments and supplies, drawing material, etc., the exhibits ranging from thumb tacks and tape measures to slide rules, transits and levels.

Maire Paint Co., Minneapolis, Minn.—Circulars of special paints for roofs, structural ironwork, etc.

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